

# Manufacturers Record

## Exponent of America



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Baltimore, Md.  
DECEMBER 16, 1926

### The Cause of Agricultural Depression and Western Bank Failures.

Thirty billion dollars of loss was brought upon the agricultural interests of the country between 1919 and 1922, the most stupendous loss ever suffered by any industry in this or any other country. The decrease in the value of farm property in that period was \$18,000,000,000, and the decline in the value of the crops of 1920 and 1921 as compared with the value of 1919 was over \$12,000,000,000, although these crops had been raised at a very high cost, the farmers having been urged by the Government to put in the largest acreage possible. Following this effort of the Government, they planted for big crops, raised at a higher cost than ever before. The failure of many Western banks recently is merely the inevitable outcome of this situation. These banks have been carrying farm loans for years, hoping eventually to save themselves, but every farm sold under mortgage lessened the selling value of every other farm in the community. Many banks could not continue to stand this steady shrinkage in their assets.

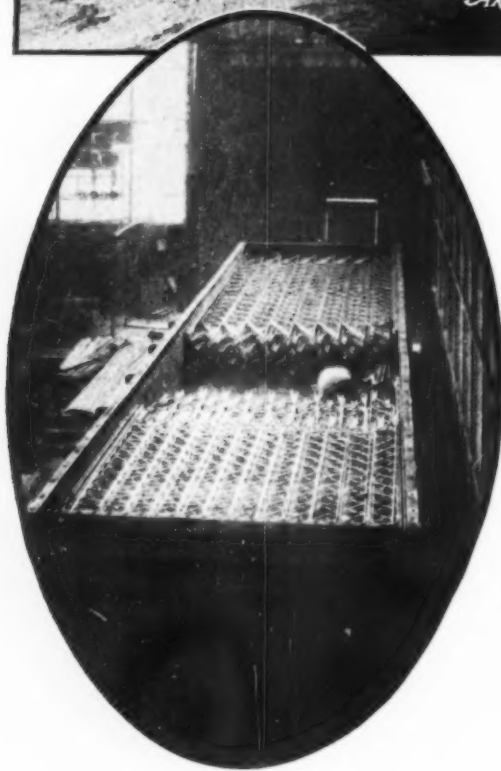
In 1920 the Treasury Department and the Federal Reserve Board, working in harmony, began a deflation campaign which wiped out this \$30,000,000,000 from agriculture, and probably not less than \$20,000,000,000 from the industrial and general business interests of the country. Despite all this, some of the men who were responsible for this fearful blunder, or crime, whichever it may be called, still attempt to ignore the facts and try to excuse themselves.

This tremendous loss, more than the total cost of the war to the United States, even including the money loaned to the Allies, fell upon agriculture with such a deadening power that the farmers of the country have never yet recovered. Hundreds of thousands saw the accumulations of a lifetime wiped out. As a whole, the farmers of the country are still struggling under the indebtedness incurred at that time. In a vain effort to save themselves by increased production, they have been raising more of corn and wheat and cotton and other products than they could sell at a profit. Many of them have found themselves the poorer because of this heavy increase in production.

Primarily, the depression in agriculture, which is bringing forth a thousand and one suggested remedies, most of which are chimerical, is due to the burden of \$30,000,000,000 of losses which the farmers faced in two years of deflation in 1920 and 1921. It is impossible for the Government to wipe out the indebtedness thus incurred, although the Government itself was responsible for this financial crime, because it was the combined act of the Treasury Department and the Federal Reserve Board.

Manufacturers and business men generally suffered almost as keenly as the farmers, but they could the more easily adjust themselves by the reduction of their output and, therefore, could the more quickly get back on their feet financially, but their losses were also staggering. The farmer cannot so readjust his business and, therefore, his suffering has been longer continued.

In studying all of the problems connected with agricultural interests it should be borne in mind that no new legislation, no new plan can be devised which will ever overcome that \$30,000,000,000 of loss. Agriculture must of necessity suffer long and endure much before it can be restored to the conditions existing prior to deflation. Increased industrial employment, drawing men away from the farms, will be helpful, for we are producing more than we can sell at a profit under present conditions. With a cotton crop of over 18,000,000 bales, it is absurd to think that the world will take it at a price in keeping with the real cost of production for the average tenant farmer, and the bulk of the cotton crop is raised by tenant farmers and small farmers producing only five or six bales each. The West, however, seems to be suffering far more than the South, and the cost of living for Western farmers by reason of their intense winters is far greater than for Southern farmers.



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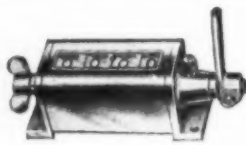
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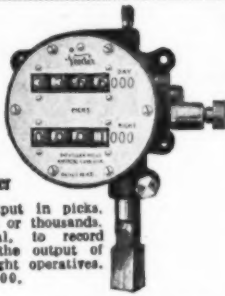


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Vol. XC No. 24 }  
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## The President's Message Epochal in Some Ways.

THE President, in his message to Congress, has unservedly met the challenge of international finance on the tariff question. Let the bankers write what manifestoes they wish in London or in Paris, the President sweeps aside the whole theory of their argument by a brief array of incontrovertible fact.

The customs receipts for the fiscal year will exceed \$615,000,000, the largest in our history, and the value of our imports last year was \$4,466,000,000, an increase of 71 per cent since the Fordney law went into effect. On only a third of these imports have we been levying any duty at all. We are affording to foreign nations an annual market in excess of three billions of dollars, or a market 71 per cent in excess of the market they did have prior to the enactment of the existing law.

The American protective system, in other words, by safeguarding the general prosperity of the nation through protection of some highly competitive industries, so enhances the gross purchasing power of the nation that it is enabled to purchase even from abroad more than double what it was able to buy before such safeguarding was in effect. Rarely in an economic policy so buttressed by arithmetic as is the American protective system. It was revived when depreciated currencies were wrecking the whole world of trade and when almost panic conditions existed in our own country. Never did a tonic more thoroughly justify itself. Not only did it raise vast revenues, which permitted tax reduction, but it swelled income throughout the country, further enriching the Treasury, and added billions to the national wealth in the worth of industries, protected and unprotected. Not only did it do all these things for America herself, but it built new traffic for the oceans and poured wealth into nations exporting to us. No wonder that the President rebukes those gentlemen who would change a system of such demonstrated merit, and no wonder that he is content, if need be, to go before the country on such an issue.

The tax proposals of the President were obviously a compromise, a sort of makeshift. Mr. Mellon did not care to risk revision of an Act which has not yet been operative a full year. Yet a great surplus stared him in the face and there was an economic as well as a political demand that relief be given to the taxpayers. A refund seemed the obvious way to gain time. But both parties have repudiated

that suggestion. Yet there is merit in it. We think the time will come when such a system of rebates will be the accepted method of taxation. Our internal revenues reflect to an unparalleled extent the tide of trade. The income of the American Treasury, more than that of the treasury of any other nation, comes from trade activity. None of it, for instance, comes from land on which there can be fixed assessments and fixed returns. An income tax rate, to illustrate, that might produce \$500,000,000 in an exceptionally fine business year might not produce \$400,000,000 in a year less prosperous. There is danger in securing too large a yield and it is worse if the yield proves too low. It is best to take the safe course and keep the rates at levels which are certain to balance the budget and thereafter to make bookkeeping refunds, should a large surplus result. Undoubtedly the President's suggestion would be followed now were it not that the income tax yield comes almost wholly from corporations and wealthy men, and the benefit of the refund would accrue to them chiefly. We have never believed that it promoted good citizenship to relieve the great mass of citizens of all direct Federal taxation, and one bad aspect of it is revealed by the present situation.

When we were urging reduction of cotton acreage, back in the distressing period of 1919-1920, the then Governor Allen of Kansas scathingly denounced the suggestion as immoral. That was the view of Washington, where fiscal authorities insisted brusquely that what the world needed was more, not less, production. Unfortunately, the gentlemen who so believed were in control of national policy and they were able to deluge the country with disaster and hold back for months the destined practice of modern economics, which is to allocate production to demand. It has remained for a Republican President to tell the Democratic South that the only way out for cotton is to cut the acreage and curtail production. And this is something of an advance on the part of President Coolidge also, who does not set up a mental barrier against facts. Agriculture is an industry and must use the methods of industry in marketing. Production is a main element in marketing, for it determines the quantity to be sold. The President is against price-fixing by the Government, but he is not against the Government lending its financial aid to the financing of what makes possible curtailment of production. The only conclusion is that he favors price fixing in-

directly, through the initiative of private interests. Ages ago the great and governing principle was enunciated: "The laborer is worthy of his hire." We have recognized it in our national railway policy and the manufacturing industry has begun to yield obedience. So, too, are we coming to see that the efficient farmer is entitled to his reasonable profit and that sound national policy requires that he get it, instead of being left to bear the full burden of his disorganization.

But we doubt if the President goes far enough on agriculture. The cities underrate the agricultural discontent. There is in it potential political explosions that may change the face of industry. It is something that cannot be side-stepped. Six years of trying to do so ought to be conclusive on that point. We have never had a deliberate agricultural policy since the Civil War and the time has come when one must be formulated. The policy of drift will not do.

The belief has got about that the President worships economy for economy's sake and has no vision. But in this latest message he has declared a program of epochal importance. "Expenditure of this character is compatible with economy; it is in the nature of capital investment." In that short sentence Mr. Coolidge gives his reason for endorsing a vast and comprehensive program looking toward the development of the nation's waterways and the opening of the great Mississippi system of cheap water traffic. That is not all. The Administration is getting ready to put itself solidly behind the proposal to make the Great Lakes an inland ocean, whether by the New York or the St. Lawrence route. It is a vast undertaking, requiring years for its consummation, but it means a new empire in the interior, from the Lakes to the Gulf. It is more important even than the Panama Canal, which must soon be supplemented by another canal by way of Nicaragua.

Nor is there any reason why the railways should oppose so magnificent an improvement of the waterways. It has been asserted so often as to be almost accepted that the Panama Canal "broke" the transcontinental railways and was responsible for the St. Paul receivership. But Mark Potter, who does his own thinking, one of the two receivers for that road, recently testified that, in his opinion, the great growth occasioned on the West Coast by the opening of the Canal had so increased all business that the railroads' share of that new business was probably greater than the normal increase would have been had the canal not been built. Give the interior of the country a seafront and in the general enrichment that will follow the railroads also will share, and share prodigiously.

We cannot agree with the purely legalistic view which the President and his Administration take of the war debts. It is not true, incidentally, that "they (foreign nations) have agreed to repay us all that we loaned to them and some interest." To take such a view is to play with the statistical tables and it is to deprive the nation of that satisfaction which it has been able to get from other statements of the fact by responsible officials, that fact being that substantial cancellations have been made in all the debt settlements, that with Italy being particularly marked.

We cannot rejoice with the President because other nations have agreed to pay in spite of "the real sacrifice that will be necessary" on their part. We do not like to strike such bargains with distress. We do not think that it behooves so great a nation, so bounteously blessed by Providence, so enriched in treasure by the war, to hold our friends to the letter of their bond. We may collect great sums. Midas did like-

wise. We have the eons ahead of us, in a world that inventions draws closer and closer together. We have a system of prosperity to maintain, a standard of living up to which, for our own protection, all the world must be brought. We require prosperous neighbors who can meet us on even terms. Whatever we do to drive down the standard of living in Britain or the Continent we shall pay for over and over again in the years to come. Better for us that foreign peoples should have a large purchasing power than that we should collect owed dollars now. The lure of the silver room should not blind us to the golden one beyond if we are to think in terms of metals. The moral sense of the American people is going to unite with its economic sense sooner or later, and every debt settlement will be modified. We have no doubt of that, but it is a pity, a disaster to the world, that the event should be delayed.

This Congress is going to accomplish little of importance. It meets merely to pass the supply bills. The President had this in view, no doubt, when reporting on the state of the Union.

### FOREST CONSERVATION ESSENTIAL TO CONTINUED PROSPERITY.

THE forthcoming report of Alexander McDonald, Conservation Commissioner of New York state, will say: "Last year 10,380,000 trees were distributed from our state nurseries, whereas this year the output was 20,481,112." What a strange performance this would have seemed to our forebears! What wild, insane extravagance!

Three hundred years ago 822,238,000 acres of land in this country were covered with virgin forests. The few white colonists who had then settled on our Atlantic seaboard had made no measurable impression on the vast stands of timber that crowded their little clearings and sheltered their redskinned neighbors. Timber was a nuisance to be cleared away and burned before the land could be cultivated.

Today our forest area has shrunk from 822,238,000 acres to 136,160,000 acres of virgin timber and 365,672,000 acres of second-growth, while our population has increased from a small settlement in Virginia and a smaller settlement in New England to 115,000,000 people, and our lumber requirements have grown correspondingly. From a nuisance to be cleared off and burned, like weeds and brush, our forests have become gold mines to many lumbermen, the basis of great industries and an utterly indispensable commodity to our people. Yet until very recently our old attitude toward our forests had not greatly changed.

Today, though, that attitude is changing in some quarters rapidly; in some with agonizing slowness. For the most part it comes only after forest depletion has already reached a damaging if not actually a disastrous stage. Northern and Eastern states, almost denuded of forests—and in consequence threatened with the loss of important industries—a few years ago began enacting laws for forest preservation. New York's progress has been mentioned. Once the awakening takes place, action is vigorous; but how much cheaper for the taxpayers and lumber users if it came before such advanced stages of denudation were reached!

Some of our Southern states have begun to awaken. Louisiana, conspicuous in this regard among all the states of the Union, is deeply indebted to a very small group of lumbermen of exceptional vision and public spirit. "In North Carolina legislatures still consider any request for direct or indirect aid in reforestation as the whim of a 'passel of nuts' with extravagant notions as to how to spend the state's money," says the editor of the Raleigh Times. In this deplorable mental inertia—if this be true—North Carolina Legislatures are not peculiar. If they run true to the form established for



them by the legislatures of other states they will stubbornly refuse to spend money on reforestation until denudation has reached an appalling stage and the cost of reforestation is twice what it would be while seed trees are still abundant and extensive hand replanting unnecessary. But if they measure up to what the country has come to expect of North Carolina, they will spend money freely for the conservation of the forests they still have. But if the Times' stricture is justified, at least the North Carolina Legislature is indulgent with the "nuts," for Wade H. Phillips, director of the Bureau of Conservation and Development, announces that 70,000 pine seedlings are now available to farmers at cost. These seedlings represent the state's first crop of the kind, and it is expected that 400,000 seedlings will be available next year. At this rate of multiplication, the state should soon be meeting its needs in seedlings as adequately—with a much smaller number of seedlings—as New York state with its greater number can meet the needs of that state.

### A FORMER CANADIAN BANKER WARNS AGAINST BRANCH BANKING.

TWO weeks ago we published an interesting statement by Guy M. Walker of New York against branch banking. Since then we have another letter on the subject in which, after repeating his own opinion against branch banking, he encloses a copy of a recent letter from F. C. Broomfield in the New York Times. Mr. Walker writes:

"I enclose copy of a clipping from Saturday's New York Times on the subject of branch banking, which is not only absolutely in support of the position taken in my letter to you on the subject three or four weeks ago, but you will notice that it is written by a fellow who says he used to be a manager of a branch bank in Canada.

"There is only one other point to be made in connection with the branch-banking proposition, and that is, that if the branch-bank system should ever come into vogue, it would destroy the source from which big banking centers draw their managers and presidents. I have for years harped on the fact that the banker in the big city knows absolutely nothing about values and so he depends on the ticker and the tape that shows him stock exchange quotations, and pretends that he is a conservative banker when he refuses to lend on anything 'except listed securities.' The only place where a banker can learn what things are worth is in the small bank. There he has to know what wheat is worth, what cattle are worth, what lumber in the pile is worth, what cotton in the warehouse is worth, what merchandise in the small-town store is worth, and it is because these fellows are the ones who know what things are worth and so are able to tell whether or not a loan is well secured that they are constantly being called to the big cities, where the bankers know nothing at all about cattle paper, lumber paper, elevator paper or anything else, except what the tape and the ticker tell them."

Under the heading, "Our Banking System Best," F. C. Broomfield in the New York Times writes:

"Having been at one time a Canadian banker, I used to think the branch system was both safer and better in every way than the single bank. Today I feel that the American system—or as it is with the branch-system feature eliminated, though this does not mean that there should be no branches in the same city or metropolitan district—is the best in the world, though a long way from being perfect.

"The argument in favor of the local bank is that it attracts talent which is not content merely to receive deposits and make loans, but builds up the industries of the section served. The branch manager sent from the large center, whose stay is likely to be brief, usually fails to get the local viewpoint and is often out of sympathy with it; while, if he is in accord, probably the head office is not.

"The smaller branches are likely to be merely depositaries of the head office and the funds used in the large cities. It is certainly not desirable that the large centers should be built up at the expense of the smaller communities. However, the greatest danger, no doubt, lies in the centralization of financial control, which branch banking would facilitate."

### POURING CAPITAL INTO EUROPE A DANGER TO AMERICA.

EASTERN bankers continue to pour capital, apparently almost without limit, into business enterprises in Europe and South America and into Government loans. It was even suggested by an attendant of Queen Marie of Rumania that now that America was better acquainted with Rumania by reason of the Queen's visit it was hoped that Rumania would be able to borrow as much as \$500,000,000 from America.

The freedom with which American money is being poured into these foreign countries is dangerous. It will entangle us in every diplomatic quarrel of Europe. It will tie us to other countries more forcibly than the League of Nations could have done even if we had entered the League. "Dollar diplomacy" will become the dominant factor in shaping American negotiations with foreign countries unless we lessen the tremendous activity in putting money into other lands. If the banking interests of the East that are so eager to lend American money to foreign Governments and foreign industries would turn their attention with equal zeal to a study of the resources of the South, they would find an empire of limitless possibilities as yet only in the infancy of its development.

Millions and hundreds of millions of money could be poured into the South to the advantage of the investors and the advantage of the whole country by utilizing the vast resources of this section as a latent asset, in part, awaiting the fullest development by American genius and American capital. Such a development would mean an enormous increase in the buying power of the South. It would mean an ever-expanding market for the products of the North and West. It would do more to develop American business and industrial interests than will all the money which we are putting into foreign affairs. Moreover, this money would be kept at home. It would be utilized in the upbuilding of a vital part of our own land. It would enrich us in time of peace and strengthen us in time of war; whereas the money we are putting into industries in other lands would in many cases be a factor against us should we ever again become involved in war.

We have no thought whatever that this country will not some day be faced by war, and by a war of such magnitude as to test its fullest power, for human nature has not changed and the nations of the earth are made up of individuals, many of whom are moved by the same spirit that has dominated individuals and nations through all the centuries of the past.

It is folly for this country not to realize that it must upbuild its own resources, develop its own industries and utilize its vast natural resources for service in time of peace and for abundant protection in time of war.

### OUR DEALINGS WITH MEXICO.

E. N. CHILSON, vice-president of the J. G. White Engineering Corporation; one of the great engineering and contracting companies of this country doing business throughout the world, in a letter to the editor of the MANUFACTURERS RECORD writes:

"I take this occasion to congratulate you and the MANUFACTURERS RECORD for having so clearly set forth the 'bungling' of the Mexican situation by our State Department.

"If more writings of this kind were to appear, especially in trade periodicals, the thinking people of this country would wake up to a situation that at this very moment bids fair to seriously cripple a struggling people.

"Mexico is trying to come back and President Calles is doing his best to meet and overcome the many difficulties that beset his path. He is a strong man, well fitted for the job, and if our Government does not extend a helping hand

to him, it will fail at a time when a little help to a neighboring State would go a long way toward placing that State on a firmer foundation."

We are glad to have Mr. Chilson's hearty commendation of the position we have taken from time to time in regard to the bungling of our diplomacy in connection with Mexico. This has been one of the sad features of our apparent inability to understand Mexico and its people.

This letter from Mr. Chilson, coming from a business man so thoroughly acquainted with the Mexican situation, should carry weight with the Administration.

### MANY IOWA BANKS FAIL AND SOME PROMPTLY RESUME.

A VERY interesting illustration of the spirit of co-operation on the part of Western farmers and others to meet the acute situation developed by the closing in one day of 19 banks in Iowa is given in a dispatch from Des Moines. According to this dispatch, the people generally united in a vigorous campaign to secure from the depositors in these banks waivers against any attempt at immediate withdrawals of the deposits.

These banks, like many others that have failed in the West, have "frozen accounts." Much of their money is tied up in mortgage loans and in loans to farmers which it will take probably a year or more to work out. We publish the dispatch as showing the spirit with which the people met the situation and endeavored to enable the banks to reopen for business:

"Des Moines, Iowa, November 26 (A. P.).—Business men and farmers of Palo Alto and Kossuth counties left their own affairs today and joined forces with officers and employees of 19 banks in a canvass of depositors designed to bring forth enough time waivers on deposits to permit the institutions to reorganize and resume business. The banks were closed today by agreement in an effort to halt what was termed unwarranted withdrawal of funds that threatened disaster.

Throughout the two counties teams of waiver solicitors were organized to visit each depositor. Their operations were somewhat similar to the work of Liberty Loan campaigners of war days, and reports reaching State banking officials here tonight indicated the "drive" would be satisfactorily concluded within a few days. Many business houses were closed while their proprietors joined the ranks of those working to save the banks and to reopen them on a reorganized basis at the earliest date.

"The closed banks include 12 under State charter, 6 national and 1 private institution. Their directorates decided upon the simultaneous closing when a general anxiety on the part of depositors developed over the recent closing of a string of banks in Clay county. By coincident, the Clay county banks reopened for business today after securing sufficient waivers to permit reorganization."

A few months ago, by reason of the fraudulent action of one trust company, a number of small chain banks all tied together, and into that trust company, and operating in the smaller towns of Florida and Georgia, had to close their doors, not because they were insolvent, nor because they had made bad loans, but mainly because they kept their surplus money in an Atlanta trust company which failed. That failure immediately necessitated their closing, in order to find out where they stood. The situation was entirely different from that in Iowa, and did not indicate any such general financial distress as must exist in that State to have produced the failure of so many independent banks within one day.

A large proportion of those chain banks in Florida and Georgia, which were temporarily closed, have resumed, as have other banks which had shut down because of the run on them started by those failures. The situation in Iowa will probably work out equally as well, as many of the banks are already reopening, their depositors having largely waived their right to call for their deposits for some months to come.

### ANNUAL ROAD NUMBER OF THE MANUFACTURERS RECORD WILL BE PUBLISHED JANUARY 6.

FOR some years the MANUFACTURERS RECORD has been issuing an Annual Highway Review Number, featuring the road-building program of the 16 Southern States and discussing in a broad way the road situation of the entire country. The facts in these annual summarizations of highway development—past, present and prospective—from year to year have widely attracted the attention of road builders, highway engineers and road-building equipment and material producers and distributors.

The 1927 Road Number of the MANUFACTURERS RECORD will be published on January 6. It will be broadly distributed at the National Road Show held in Chicago the week of January 10 and, in addition, will have a wide circulation, reaching private and public road-building officials and others interested in the country's highway developments.

The facts emphasizing the need for greatly increased expenditures on our highways to meet the growing transportation requirements of the country form the keynote of this year's special road issue. It will contain articles written by highway officials and others familiar with the road-building operations and problems that face the country in supplying arteries of travel to meet the new era of transportation which has come with the development of motor freight traffic and motor passenger bus lines. Among the subjects will be a discussion of some requirements of the highway of the future, including the building of highways and toll bridges at big aggregate costs by private enterprises; the building of highways up to 200 feet wide in the congested traffic areas; the problems of traffic control to eliminate congestion and speed up through traffic and thus increase the efficiency of motor-vehicle operation; the steps that are being taken to provide safe highways are elaborately discussed, covering every phase of highway safety work. Other articles tell of the outstanding uses to which motor trucks and buses are being employed and the value of this supplementary transportation service to the building up of suburban and rural sections and the general advancement of living conditions. Comprehensive figures are presented to show not only the magnitude of the expenditures for road work through the country, and the South in particular, but figures are given from a number of sources to show that this investment pays big dividends to motor-vehicle owners as well as to the people of the country at large.

The road section of our issue of January 6 will cover about forty pages and contain illustrations of the highways developments, showing many recently completed outstanding road and bridge projects and types of construction used. The subjects treated not only tell of what has been accomplished in the South, but include the status of present operations and the contemplated future construction problems of the various States.

The MANUFACTURERS RECORD believes the information given will be one of the most comprehensive surveys yet presented on the country's highways developments and problems, and measured by the experience of the past the issue will command widespread attention.

IN endorsing a refusal by Dr. William J. O'Shea, superintendent of New York city schools, to permit the American Civil Liberties Union to hold meetings in public school buildings, Dwight Braman, representing the Allied Patriotic Societies, said: "We must guard the schools against sedition, revolution and anarchy and any germs of these diseases." And the American Civil Liberties Union is one of the greatest such "germ carriers" in all the world.



## WHY NOT A SOUTHERN BUSINESS MAN FOR PRESIDENT?

**U**NDER the title "An Engineer for President" the American Association of Engineers has issued a news statement that the board of directors has adopted the following resolution: "Resolved, That the American Association of Engineers, through its board of directors, does hereby endorse the elevation of an engineer to the Presidency of these United States."

As the basis for this action, the preamble explains that "much of the present high standard of living in this country has been accomplished through the practical application by engineers, of scientific and engineering principles to industry, and the more recent application of these principles to our Federal Government has resulted in a remarkable co-ordination of industry and government to the great benefit of every citizen." Finally, the board of directors thinks that "future development of industry and increased prosperity of the nation are dependent upon an extension of these principles and co-ordination, which can best be attained by the placing of Chief Executive authority in the hands of an engineer."

Undoubtedly, this view is sound, provided the engineer be equally qualified for the Presidency in other respects. The simple fact that the engineers of the land have done inestimable service to the country does not necessarily prove that an engineer would make a good President any more than would any other able business man of Presidential timber.

The nation needs, first and foremost, the best qualified man in the land. If such a man prove to be an engineer, we shall be the first to congratulate the profession and the people. It is, of course, easy to imagine that the American Association of Engineers had Secretary Hoover in mind in issuing its statement, but if the engineers think an engineer should be made President because of the great work of engineers, then why not the National Association of Manufacturers think that its president—who, by the way, is really of Presidential timber quality—should be made President? Why should not the iron and steel interests of the country demand that a great iron and steel leader be made President, since that is the most important single industrial interest in the country? But, then, the farmers might feel that by reason of their numbers and their importance they should have a right to demand that a farmer be made President, and there are some farmers in this country who would probably be successful in that office.

If we run down the list of great industrial leaders worthy of the nation's highest honor, men who are equally as constructive in their work as the engineers, we might name such, for instance, as Dr. Charles H. Herty, the chemist whose work largely enabled this country to create its chemical industry, thereby helping us to win the war. We might suggest John F. Edgerton, the Christian statesman, so highly appreciated by the manufacturers of the country, North, South, East and West, that they keep on forcing him to hold the presidency of the National Association of Manufacturers. Then there are men like John Kirby of Texas, big enough and broad enough, and with a nation-wide vision, to make suitable Presidential timber. There are few men in the country who have accomplished as much for one State and for one great industry which ramifies throughout a vast region as George Gordon Crawford, president of the Tennessee Coal and Iron Railroad Company. He is a genius in executive management and in technical knowledge. He is a man big enough to fill the Presidential chair. These are all Southern men of the highest rank, and has not the time come for the South to name some man of such standing as its offer to the nation?

We could name a half dozen or more other men, who as great business leaders, as broad thinkers, as statesmen in every sense of the word would be of far more worth to the

country than the average politician who seeks and sometimes obtains a Presidential nomination.

And why should not the country some day turn to men of this character? Why should it forever depend upon the politician and the lawyer? This is a business country. Its problems, many of them international in scope, it is true, are problems which a highly educated great business leader could solve to better advantage than 99 politicians out of 100. Upon our business development, and that, of course, means agriculture as well as industry, depends the prosperity of the people. Why, then, should we not sometimes put in the Presidential chair men who know every problem connected with business and who are fully capable of understanding every international problem?

We are reminded in this connection of a statement made early in the World War by one of the greatest business leaders America has ever produced, in which he said to the writer that if it had been possible in advance of the war to gather around a table the foremost business leaders of Europe and America they could have settled all the problems which resulted in war, whereas the politicians—or so-called statesmen—could not do so.

It is altogether probable that the American Association of Engineers had Secretary Hoover in mind in suggesting the elevation of an engineer to the Presidency of the United States. It is immaterial, however, whether Mr. Hoover was the man or not. But perhaps the action of that organization may set our people to serious thinking on the subject of selecting in some of our great business leaders big, broad, brainy men of vision, Presidential timber in size and quality, instead of yielding forever to the politicians. And this, of course, is in no way whatever a reflection upon the Presidents that we have had or the one who is now holding that office. And the South could properly present to the nation some of its great business leaders worthy to hold such an office, instead of forever running after small politicians of other sections.

## HOW AMERICANS IN FRANCE VIEW IT.

**A** DISPATCH in the Kansas City Star from Paris, under date of November 26, says:

"Following the American banquet Wednesday night, when every reference to the debt cancellation was cheered loudly by 500 Americans, a majority of whom long have been residents of France, Dr. Joseph Wilson Cochran, pastor of the American church of Paris, yesterday delivered an impassioned sermon warning America against greed and usury.

"In the presence of Ambassador Myron T. Herrick, General Gouraud and many leaders of Franco-American society, the pastor exclaimed from the pulpit:

"If America were to bind any nation of the world with commercial bonds for two generations I hope to God I never would dare sing 'My Country, 'Tis of Thee, Sweet Land of Liberty' again."

"Several members of the congregation which packed the church shouted deep-throated 'Amen,' many persons being visibly affected by the intense emotion of the speaker."

## TURNING THEM SOUTHWARD.

**A**NDREW J. FRAME of Waukesha, Wis., one of the leading bankers of the country, in the course of a letter to the MANUFACTURERS RECORD says:

"I am deeply impressed that the South is indebted beyond anything it can ever repay to the MANUFACTURERS RECORD and its illuminating and splendid articles which so enlighten the public as to the South's development. These illustrations and articles must wonderfully help the advance of the South."

The impression made upon Mr. Frame is similar to that made upon all other people in the North and West who read the MANUFACTURERS RECORD, and who are thus stirred to a livelier interest in the future of the South.

# A Letter on Muscle Shoals and a Reply.

"An Open Letter to Richard H. Edmonds, Editor  
Manufacturers Record."

Florence, Ala., December 4.

Richard H. Edmonds, Editor,  
MANUFACTURERS RECORD,  
Baltimore, Md.

My Dear Sir:

You will recall that in my letter to you of September 16 I referred to the fact that I was planning to visit Muscle Shoals and would write you a statement of my views after making that visit. I have spent several days at Muscle Shoals recently in company with E. H. Jones, Commissioner of Agriculture of Vermont, and, while we are only laymen in such technical affairs as water-power and industrial chemistry, there are certain features of this Muscle Shoals situation which we can appreciate without being either engineers or chemists.

The first thing that impressed us was the Tennessee River itself. Many of us in New England have only a hazy notion of the size and importance of the Tennessee, but after crossing this broad stream at Florence, Ala., we are not surprised that the United States engineers report that more than 3,000,000 horsepower of water-power is commercially available within the Tennessee Valley.

That the Tennessee River can be permanently improved by a series of dams is evident. Such an improvement, however, will be expensive. We doubt whether a series of dams would ever be built if the present volume of traffic on the river were the only reason for building them, for the Tennessee River today cannot be said to be a commercially navigable stream. It is the power development which makes the construction of these dams probable, and cheap water transportation for the upper Tennessee Valley must wait until it becomes feasible to build these dams for power purposes.

We have just inspected the great Wilson Dam, which soon will be ready to supply 260,000 horsepower. What final arrangements should be made to use it seems to us to be perfectly evident in that there is no public-utility market in the Tennessee Valley for any such amount of power, and if the Muscle Shoals power is distributed chiefly within the Tennessee Valley and vicinity there will be a large surplus that will make the building of other power dams in the Tennessee River wholly unnecessary and will undoubtedly postpone the completion of the improvement of the Tennessee River for many years. On the other hand, if the Muscle Shoals power is not to "flood" the Tennessee Valley and delay the construction of these useful navigation improvements, then it must find a market in other regions and the efforts of the people of the Valley through their River Improvement Association will be largely lost.

We believe that the Valley people are entirely sound in their contention that the Muscle Shoals power should be used, first of all, for the purpose to which Congress dedicated it—namely, the peace-time manufacture of fertilizers as the basis for the war-time production of explosives, rather than to divert it to ordinary utility purposes.

If this is done, then the industrial growth of the Tennessee region will bring with it the completion of the river improvement for which the Valley people have been working so long, and this will come about without the loss to the Tennessee

Valley of the Muscle Shoals power. The power companies argue that distribution of Muscle Shoals power means new industries. Instead, it is much more likely to mean merely the shutting down of many small plants now operated at little, if any, profit to the power companies, and substituting Muscle Shoals power at a large profit to these companies.

Now, Mr. Edmonds, these people are not advocating a policy of mere selfishness; on the contrary, the course which they advocate, in our opinion, gives the greatest promise that the benefits of Muscle Shoals in the form of cheaper, more concentrated fertilizers will be most widely distributed, and thus the benefits to the South, in which you are vitally interested, will be greatly enhanced through the distribution of fertilizers over a wide area rather than the distribution of power over a limited area.

The Tennessee Valley people are advocating the acceptance by Congress of the proposal of the American Cyanamid Company, who would use the Muscle Shoals power chiefly in the manufacture of these highly concentrated fertilizers. This company has had many years of experience with the cyanamid process of nitrogen fixation, which is the process installed at nitrate plant No. 2. They are now engaged in the manufacture and sale, in a large way, of the very kind of concentrated fertilizers which can be used to carry the benefits of Muscle Shoals power to every fertilizer-using State, and they definitely agree to produce this highly concentrated kind of fertilizers.

The process which the Cyanamid Company propose to use, unlike that of the power companies, is no theoretical scheme that never has met the test of commercial competition in the American fertilizer trade, and they are not proposing to work out their fertilizer program in a plant which exists only on paper, if it exists at all, but would operate the splendid plant that we have just visited, nitrate plant No. 2, representing a Government investment of more than \$67,000,000.

It is true the power companies claim that their offer will mean fertilizer production, but their proposal is worded so that a failure of their fertilizer operations leaves them free to use the power with greater advantage to themselves than would be the case if their fertilizer operations succeed. They place a premium upon the failure, not upon the success of their fertilizer operations.

The Cyanamid Company, on the other hand, provide in their proposal that when the fertilizer plant is shut down they shall get no advantage by turning its power supply to other purposes. If they use it themselves, they must pay a fair market price for it, and if they sell it to others, then the Secretary of War is to decide what shall be done with the profits. After a careful comparison of the proposals it is very apparent that it is the Cyanamid offer and not the power offer that promises concentrated fertilizers.

The area that could be benefited by utilizing Muscle Shoals power for utility purposes is limited by the comparatively small radius of economical power transmission. No such limitation exists if the power is used for the manufacture of improved, concentrated fertilizers. The farther such fertilizers have been shipped in competition with ordinary fertilizer products, the greater the saving.

Our interest in Muscle Shoals grows out of one chief consideration—we want to help the agriculture of New England. State lines to us mean very little.

In undertaking to build up a stronger economic position for our New England farmers there are certain difficulties that we have to meet. Our growing season is rather short; our lands like those in the South, have lost a large part of their original fertility, but most of them are well served with



transportation and are located but a short distance from the country's best markets.

If our production costs were sufficiently low and the quality of our farm products could be maintained at a high standard, our farmers would have little cause to complain. What we need is a higher yield per acre without a corresponding increase in the necessary labor. That means fertilizers in a much larger quantity than we now use.

It would be the height of folly, however, for us to advise our farmers generally to double up their fertilizer purchases at \$45 to \$70 per ton, and it is not likely that they would do it. It probably would not pay them, and in general they lack the means with which to finance such a large increase in fertilizer consumption. Our studies for the past six months and our visit to the Muscle Shoals plants themselves all lead us to believe that the opportunity exists by using the present nitrate plant to produce our commercial plant foods in these new concentrated forms at prices that will bring them within the reach of our New England farmers and enable them to employ this great labor-saving device on a scale which they now cannot afford.

Now, Mr. Edmonds, we have lost 10 years in a series of unsuccessful efforts to utilize the Government's Muscle Shoals plants in the service of agriculture. The enterprise is not one that is in any way adapted to Government operation. To undertake to have some Government bureau operate a huge commercial fertilizer industry would be to invite a disastrous failure, and in any event it is contrary to established public policy for the United States Government to compete with its citizens in commercial enterprise. We have an opportunity to accept a businesslike offer to have these fertilizers made in our existing plants by responsible people who are now successfully producing in a large way the same fertilizers that they would make at Muscle Shoals. It would be a sorry trade to sacrifice such a chance in order to accept a proposal of some electrical power companies who would undertake a business which from its very nature is entirely out of their legitimate field and who would reduce their fertilizer obligations to the basis of a mere experiment.

We deem it a case of great regret that the contending parties at Muscle Shoals cannot agree. There is no sound cause for the power companies to further obstruct the progress of this development, and their half-hearted gesture toward fertilizer production, in our opinion, is entirely unwarranted. People generally do not approve of having their public-utility companies engage in financing some speculative manufacturing venture. State governments do not protect the profits of public-utility power companies for such a purpose. These associated Southern companies do not need the Muscle Shoals power, for a vast supply of other power awaits development for public-utility purposes in this region wholly apart from Muscle Shoals. Our studies all indicate that the key to the power supply of the Tennessee River is the proposed Cove Creek Dam in the Clinch River, and we do not believe that the Muscle Shoals Dam is the key to the development or control of the power resources of the Tennessee River.

Our conclusions are, after much study of the whole situation and a personal visit to the properties, that there can be no doubt but that the Tennessee River people are right in their claim that the interests of New England and the South are identical at Muscle Shoals. It is not alone in the interests of the Tennessee Valley that the great \$67,000,000 nitrate plant should not be scrapped. Its service to agriculture will not be local but national, and New England in particular will be one of the principal regions to be benefited.

Yours very truly,

ANDREW L. FELKER,

Commissioner of Agriculture, State of New Hampshire.  
E. H. JONES, Commissioner of Agriculture,  
State of Vermont.

## A Reply to the Muscle Shoals Open Letter of the Agricultural Commissioners of New Hampshire and Vermont.

Daytona Beach, Fla., December 13.

Messrs. Andrew L. Felker, Commissioner of Agriculture,  
New Hampshire, and E. H. Jones, Commissioner of  
Agriculture, Vermont.

Gentlemen:

Your open letter addressed to me, which you furnished freely to the Southern newspapers prior to my receipt of it, is so full of sophistry, so wholly unsound in every position taken, that I am hardly justified in giving attention to it. But by reason of the fact that several Alabama papers have published this letter in advance of my receiving it, I will reply in some detail.

The closing sentence of your letter explains fully your interest in the Muscle Shoals situation. That sentence, referring to the use of the nitrate plant at Muscle Shoals, reads, "Its service to agriculture will not be local but national, and New England in particular will be one of the principal regions to be benefited."

I am entirely willing that as commissioners of agriculture you should give your first thought to the benefit of agriculture in New England, but when you undertake to decide how Muscle Shoals power shall be used, in effect mainly for the benefit of New England, I have a right to protest. Muscle Shoals is a Southern asset. It should be used for the largest development of the South, industrially and agriculturally, and in that way react to the good of the whole country.

You admit that as laymen you are incapable of discussing such "technical affairs as water-power and industrial chemistry," and yet you undertake to decide what system of nitrate making is best, a thing which requires the best judgment of the ablest experts in the country. Therefore, as laymen, admitting your lack of knowledge on the subject, you rush in where angels might fear to tread. You say that you and many New England people had only a hazy notion of the size and importance of the Tennessee River. May I not ask, gentlemen, if ignorance so great as that in regard to one of the most important rivers in America is not a sad reflection upon that degree of education which is supposed to exist in New England? I trust that in this respect you were speaking only for yourselves and not for the millions of intelligent men and women in New England who, if they have all the education of which New England boasts, surely know something of the size and importance of the Tennessee River. You say, "If the Tennessee River can be promptly improved by a series of dams," and you utter that as if you were profound experts on the subject notwithstanding the fact that you admit you are without knowledge in technical affairs as to water-power and industrial chemistry.

You suggest that the 260,000 horsepower of the Wilson Dam cannot find a public-utility market in the Tennessee Valley, and that if the Muscle Shoals power is distributed within the Tennessee Valley and vicinity there will be a large surplus that will make the building of other dams in the Tennessee River wholly unnecessary. In this statement you show a very profound ignorance of the industrial development of the South, an ignorance so lamentable that it is deplorable for men holding your position to know so little of what is going on in the South and the increased demand for electric power. Possibly you are not aware that there is a power development under way on the Susquehanna River in Maryland and Pennsylvania that will produce about 400,000 horsepower, and the financiers who are backing that enterprise have not the slightest doubt of their ability to find an immediate market for every kilowatt. You are apparently

densely ignorant of the fact that the demand for electric power in the South is growing so rapidly that it is difficult for the hydro-electric companies, spending millions of dollars as they are now doing, to furnish power sufficient to meet the growing demand.

You are probably ignorant also of the fact that the very existence of these hydro-electric developments in the South is one of the reasons why so many New England cotton mills are headed for the South and why over \$100,000,000 of New England money has gone into Southern cotton mills within the last two years, and apparently we are only at the beginning of that movement. It is absolutely certain, with the industrial growth of the South, the increase in city population and the progress that is now being made in carrying electric light and electric power to the farms in many places of the South, that the demand for hydro-electric power will so increase as to necessitate the utilization within the next five or ten years, as rapidly as the work can be done, of the development of every power site available on the Tennessee River.

You expressed an interest in Southern agriculture, although primarily, as you admit in your closing sentence, your interest is for New England agriculture, and the recent statement made by Mr. Waldo to your organization expressed the thought that New England was interested in forcing the use of this power in such a way as to retard the development of industrial interests in the South which could compete with similar industries in New England. Therefore, New England's interest is, according to his view and yours, apparently to force the adoption by Congress of some plan which would halt the growth of interests in the South competitive with New England and compel the use of Muscle Shoals power for the production of things which would not in any way compete with New England.

It is needless to say that I cannot agree that this is a logical proposition, nor is it one which the South should for one moment consider. Moreover, I am absolutely certain that you do not represent the best thought of the business leaders of New England. They are not built that way. Your commission, which I take it for granted is self-appointed, consisting of five men purporting to represent New England as the Muscle Shoals Commission, must have had its origin in some suggestion that Muscle Shoals power could be made to serve New England and prove a drawback to the South's industrial development. Is it fair to ask who first made the suggestion, who financed the work that you are doing, though I take it for granted that you are spending State money on these expenses?

Is it not, however, a little presumptuous for you as New England agricultural commissioners, laymen as you admit, without technical knowledge of water-powers, apparently hopelessly ignorant of the conditions in the South as judged by your lack of knowledge of the Tennessee River, to undertake to tell the South and Congress how the Tennessee River should be developed and how the power generated there should be utilized?

You assume that the distribution of Muscle Shoals power would not mean new industries in the South, but would much more likely mean the shutting down of small plants now operated at little or no profit to the companies and substituting the Muscle Shoals power to these companies. Necessarily, this thought was not born in your own brains, for, wholly unfamiliar with the South as you are, you know nothing whatever about its growth, about the demand for power or about what power facilities exist in the South.

You emphasize the desire of certain people in the Tennessee Valley to have Muscle Shoals turned over to the Cyanamid Company on the theory that that company could best operate this power for nitrate production. I take it for granted that you are hardly aware of the fact that many changes have

come about and others are coming about in the fixation of nitrates. What may have been a good process a few years ago may be fit only for the scrap heap today. All chemists recognize this fact, but you without any chemical knowledge presume to say that only one company could utilize the nitrate plant at Muscle Shoals to advantage. You frankly say, "Our interest in Muscle Shoals grows out of our chief consideration. We want to help the agriculture of New England. State lines to us mean very little."

In that very statement, as in the closing sentence of your letter to which I have referred, you sweep away everything which you may say in connection with Muscle Shoals. You are primarily interested in New England alone. You are not concerned in the slightest with the development of the South. You have been fed up, as is evident in every sentence of your letter, on propaganda which you have swallowed without masticating mentally and which would give you a very bad case of indigestion if your digestive apparatus was not so toughened by an utter disregard of the South's welfare and a selfish concentration in your desire for the benefit of New England alone. But do you realize that if the entire power of Muscle Shoals were devoted to nitrate production in connection with fertilizer manufacture it would not be more than enough to take care of the growing needs of the central South and that portion of the West which could be reached to advantage? New England farmers would never have the benefit of getting nitrates or concentrated fertilizers made at Muscle Shoals even if the full extent of the power available there were so used. You have been sadly misled. Somebody has played you for suckers and you have eagerly swallowed bait, hook and sinker.

You say that we have lost 10 years in a series of unsuccessful efforts to utilize the Government's Muscle Shoals plants in the service of agriculture. You are wholly mistaken. We have not lost a single year, because during the greater part of that period the work of construction of the Wilson Dam has been under way and hence its power was unavailable for the production of nitrates and fertilizers. There has been almost endless talk for many years about the very great hydro-electric potentialities of the Tennessee River. I fully appreciate the extent of these powers and the necessity for their development, but it would have been absurd to expect the utilization of all of the power sites on the Tennessee River until the Wilson Dam had been completed and until the Government had definitely committed itself to the deepening of the river to make it available for transportation as well as for the development of power. In the meantime, Alabama has been moving with something like the rapidity of the fabled seven-league boots in the development of power. During the last 10 years some 200,000 or more of horsepower has been put into operation in Alabama, and, as described in the MANUFACTURERS RECORD of last week, an additional plant of 180,000 horsepower has been started and is being carried on to early completion. In Georgia and the Carolinas similar work has been pushed with vigor, and yet so great is the demand for power that these companies are constantly finding the demand exceeding the supply. As rapidly as a new supply is provided, the demand is ready to absorb it.

You were a little overfrank for the good of your own cause in freely admitting that primarily and fundamentally your interest is in the betterment of agriculture in New England and only secondary in the interest of Southern agriculture. But let me assure you that the greatest need for Southern agriculture today is an increased home-consuming demand for diversified farm products, which can come about only through a larger industrial development. Until we have so increased the number of consumers of farm products, diversified agriculture in the South cannot attain its full growth and Southern agriculture will always be halted until this condition has changed. Every factory that is started in the



South increases the local demand for Southern products. Southern agriculture for its highest development is wholly dependent upon the growth of industrial interests, and the widest and largest use that is possible of hydro-electric power will add immeasurably to the prosperity of Southern farmers.

I am not at all antagonistic to New England. I rejoice in every evidence of its progress and prosperity, but I am amazed that some Southern newspapers and some Southern people interested purely in the local situation around Muscle Shoals should count your open letter to me as worth a scrap of paper. From beginning to end it is weak, vapid, based not in the slightest on your own knowledge but on the matter which has been stuffed into you without the power of mental digestion and a mental grasp of the whole situation to show you the absurdity of trying to insist upon the utilization of a Southern resource wholly, from your own point of view, to the good of New England and not for the good of the South. I have a higher opinion of the people of New England as a whole than you seem to have. I have a higher opinion of their knowledge of the geography of the South and its resources than you have in your judgment that you and many New Englanders had no conception of the extent of the Tennessee River. Sad, sad reflection upon the educational work of your New England people! Let me suggest that you concentrate your attention in your official capacity upon inducing New England schools to so educate their students that they may know something of so great a river as the Tennessee and of other things of which, judging by your statement, they seem to be entirely ignorant.

You expressed the thought that no market can be found for the power of Muscle Shoals except by the closing down of similar hydro-electric powers and that no sufficient market would be found to justify the further development of the Tennessee River as things now are. I presume you are not aware of the construction of transmission lines through the whole central South out in Mississippi, to Memphis and Nashville and other points, and that, therefore, the entire generating capacity of Wilson Dam could be immediately consumed and that this central South region can absorb all of the power available from all of the series of dams contemplated on the Tennessee River as rapidly as they could be economically constructed. I am quite sure that all of the potential power of the Tennessee Valley which could be economically developed within the next 10 years could find a ready market and that this would be done if the obstructionists, who like yourselves are wholly ignorant of what is going on in the South, would step aside and let the work go forward intelligently and progressively.

It is a queer situation, one rather difficult to comprehend, why the people connected with the Tennessee Valley Improvement Association should find it necessary to go to New Hampshire and other New England States to beg these States to come in and help them retard the general industrial development of the South and outline a plan which, according to your own statements, is not fundamentally for the benefit of the South but for the benefit of New England agriculture.

I am unalterably opposed to any utilization of Muscle Shoals by any one company for its exclusive benefit in the immediate territory adjacent to Muscle Shoals. I do not believe that is for the best interests of the South. Moreover, I am opposed to it because the wildest and most unscrupulous real estate speculation that has ever disgraced this country, so far as my knowledge goes, has been the effort to unload, apparently in every part of America, town lots almost without number miles away from the towns adjacent to Muscle Shoals and advertised with a recklessness in regard to the truth which would shame the very devil himself. I know nothing quite equal in town-lot speculation to these wild schemes, except that movement of a New England man, a promoter of town-lot companies, who more than a third of a

century ago carried many hundreds of New England people, school teachers, doctors, lawyers, bankers and others, to a spot in Tennessee which he had advertised with a marvelous liberality in New England papers. That spot was named Cardiff. On the opening day of the sale, when dozens and dozens of Pullman cars had come in loaded with New Englanders, there was not a house in sight, except a small frame shanty put up as an office. Under a circus tent, without one single promise of any industries to be developed, but merely based on the enthusiasm which he had aroused by advertising, over \$1,000,000 worth of town lots were sold, mainly to New England people. The town of Cardiff no longer exists. It never did exist, except in the vivid imagination of the New England man who promoted it, for more than a few weeks after the sale took place. The town-lot bare-faced wild advertising around Muscle Shoals has greatly surpassed that with which Cardiff was brought into being only to die at its birth after \$1,000,000 worth of lots in open fields had been sold in three days.

Naturally, many men in various parts of the country who have been carrying on similar town-lot promotion schemes concentrated around the Muscle Shoals district are eager for the utilization of all the Wilson Dam power immediately in that vicinity in order that they may keep on selling town lots and make good some of the wild promises they have been making. I hope that no New England people are identified with such a scheme. I hope that you as honorable gentlemen, which I take you to be, have not been used by those who would continue this wild speculative town-lot booming around the Muscle Shoals region.

I have many warm friends in that district. I think many of them are too high-minded and too honorable to be a party in any way whatever to such activities. I can appreciate the desire of even these men that all of the power possibilities of the Wilson Dam should be utilized in its vicinity, but I am compelled to disagree with the wisdom of their view on the subject, for I believe the larger interests of the South will be found in the wider distribution of that power, the creation of more activities in various parts of the South from the Carolinas to Mississippi and out to Nashville and Memphis, than would be through concentration at any one point.

For commissioners of agriculture of New England, posing as members of a so-called New England Muscle Shoals Commission of two or three other agricultural commissioners, all without any scientific knowledge as to nitrate fixation, as to the development of the South, as to its ability to consume all of the power that can be generated there, to undertake as you have done in this open letter to me to tell what should be done with Muscle Shoals, what nitrate fixation plant should be utilized, all for the benefit of New England, is, in my opinion, a piece of presumption which surpasses anything that I have ever before had the privilege of knowing.

I am just as deeply interested in the fixation of nitrogen at Muscle Shoals and at other points throughout the country for utilization in peace as in war as you can possibly be and have constantly so advocated. But the way in which you have presented the matter, your ignorance of the Tennessee River, your ignorance of the South's development, your ignorance of its increasing demand for power, your ignorance of how the agricultural prosperity of the South can be advanced, is so monumental that I bid you an affectionate farewell, with the hope that you may utilize all the influence you have for encouraging a broader education of New England people as to what the Tennessee River is and what are some of the other resources of the South of which, were I to judge by your letter, they are lamentably ignorant. I am constrained, however, to believe that New England people as a whole are not as ignorant as you have suggested. I think the men who really represent New England and who dominate

its business interests know full well what the Tennessee River is, its size and its importance. For if that were not true it would show that even if they had known nothing about the river prior to the World War, they had entirely failed to read the hundreds of newspaper articles about it which have appeared during the last 10 years.

I have a feeling of respect, indeed of profound admiration, for New England and its business leaders. They have accomplished marvels against tremendous odds. They have been great creators in the broadest sense of the word, and I cannot, therefore, accept your designation of them that they do not know the Tennessee River and that they, like you feel constrained to bring about a particular utilization of Muscle Shoals for the express purpose of helping New England. I have a far higher admiration for New England's business men and the New England people generally than you seem to have.

Very truly yours,

RICHARD H. EDMONDS.

### CALIFORNIA'S REMARKABLE VOTE.

[From the Los Angeles Express.]

"Never before had the people of California expressed themselves so emphatically on the wet and dry issue as they did in last Tuesday's election. The vote to sustain the Wright State Enforcement Act was the heaviest ever polled in this state against liquor, showing the growing sentiment here for enforcement of Prohibition. The heavy vote, in fact, was a surprise. Few had been sanguine of any victory; none had dared count on such a victory. For months it had been made to appear that wet sentiment was sweeping over the state. In the circumstances the great vote polled on Tuesday in support of the Wright Act was doubly gratifying.

"It is difficult fully to appreciate the significance of the vote. Early report wired East carried information that California had gone wet by 117,000 or more. The East received that report as if it were what had been expected, and California was at once written down along with New York as definitely and permanently wet. But a few hours later the wets of the East (the same was true here) learned what to them was a dismal and disappointing truth, that California is drier today than ever before in its history. The effort to defeat the Wright Act had been defeated, along with the effort to restore race-track gambling.

"Credit for this remarkable showing—at least a large measure of the credit—will go to William Gibbs McAdoo, the only man of outstanding prominence in the state who had the courage to take up the leadership of the dry forces against the tremendous wet organization which had been formed to destroy the Wright Act.

"It was McAdoo whose influence resulted in the Democratic party state convention adopting a ringing declaration against any weakening modification of the Volstead Act and against the brazen effort to repeal the Wright Enforcement Act.

"It was McAdoo who fired the first gun in the state-wide campaign in defense of the Wright Act. Other national and state leaders were invited to participate, but McAdoo was the only conspicuous person who stepped forward and took up the fight. He spoke repeatedly during the campaign in all parts of the state, hurling the charge of nullification directly into the face of wet leaders.

"What seemingly had been a hopelessly lost cause was galvanized into life and became a great fighting force. California on Tuesday voted by more than 60,000 majority to sustain the Wright Act and to proclaim California's position definitely, solidly and permanently in the dry column. It was a wonderful victory."

We wonder how many papers which broadly heralded a reported wet victory in California gave as big a display heading to the wet defeat when the facts became known!

### LOSS OF TEXTILE MILLS TO THE SOUTH A TRAGEDY TO TWO NEW ENGLAND TOWNS.

THE South likes to secure new industries, but not when they come at such heavy cost to another section as the two textile mills mentioned in recent news dispatches, one in the New York Times, the other in the Greenville (S. C.) News.

The first, a dispatch to the Times from Ware, Mass., tells of the impending removal of the mills of the Otis Company to Lee, Ala. Ware has grown up around the mills, which were established in 1835 as the Hampshire Mills and were taken over in 1839 by the Otis Company.

The Otis Company has found it impossible to meet the competition of Southern mills. Its treasurer, Henry G. Nichols, and the board of directors have recommended to the stockholders the removal of the industry to the Alabama town, and no doubt is felt that the stockholders will approve the move.

Ware is a town of 8000 people, and while it has other industries, they are small, employing in all about 700 people. The Otis Company's plant is far and away the largest in the town, employing about 1500 people, and should it move away its monthly payroll of \$100,000 will be sorely missed. "Nearly every family in the town will be affected," says the Times. "Some storekeepers will have to sell out and depart and many families will follow their example unless another industry takes the place of the mills. Mill workers who have made part payments on homes were at a loss to know what to do. In the tenements of the Otis Company tonight there was no cheer. The six-room cottages, rented by the company for 25 cents a week a room, house half the mill workers, the remainder living in non-company houses. Many of the workers in the Otis Mills have been employed there for 30 years and some have been in the plant for 50 years. It will be difficult for many of the older people to seek employment elsewhere or to obtain other employment."

Manifestly for many people of Ware, the mills' removal would be nothing short of a tragedy.

The other dispatch, which is to the Greenville News, comes from Manchester, N. H., tells a similar story of Salmon Falls.

"The Salmon Falls Manufacturing Company, unable longer to make a profit in competition with the cotton mills of the Carolinas, has decided to suspend, and the city's chief means of livelihood, therefore, passes away," says the News.

"The situation is acute. Unless some one buys before January 1 these cotton mills, Salmon Falls will pass into a decline, its people will be forced to seek new homes and its buildings fall into ruin. The company had fine mills, well equipped to make cotton fabric, but, owing to the fact that the firm cannot compete with the mills of the Carolinas, the directors have decided to go out of business as soon as the present orders are filled.

"The Salmon Falls Manufacturing Company, done with its plants here, intends to remove to Southern fields. Just where the corporation will locate has not yet been decided. Its plant here is capitalized for \$2,300,000 and is insured for \$2,800,000. It pays in taxes about \$153,000 each year and owns all the important land in Salmon Falls. There is but one other industry there—a stove foundry employing 75 hands.

"The directors, of whom Charles J. Curtis of Boston is president and Ronald T. Lyman of Boston treasurer, definitely decided to quit."

Such drastic removals cannot be dismissed with a reference to the inexorable working of economic law. The spectacle of prosperous little towns having their business foundations suddenly collapse under them, destroying the value



of hard-earned savings hopefully invested in homes and business enterprises and throwing several thousand people out of work under conditions that render it impossible for them to sell out in order to move, is unutterably sad. Moreover, such things hurt not only the towns immediately concerned, but the country as a whole. They represent clear loss of values with no compensating advantages. But the business men of New England have long been famous for their resourcefulness in the face of grave difficulties. It is to be earnestly hoped that the bankers and business men of these two little towns may yet be successful in their efforts to find other industries to take the place of their departing textile mills.

### SOUTHERN FARMS ARE OVERPOPULATED.

THE Savannah News calls attention to the fact that two-thirds of all the boys and girls between the ages of 15 and 19 in South Carolina live in the country, and that Arkansas and Mississippi have a still greater proportion of people of that age in the rural regions. Less than 35 per cent, says the News, of the young people of the United States as a whole live in the country. The proportion in South Carolina is twice as great as the average.

No wonder the farm conditions in South Carolina are exceedingly depressed. No wonder the educated boys and girls are steadily leaving that state and all others where the farms are overpopulated. Until South Carolina readjusts its population by the development of manufacturing to such an extent that a home market is created for the brain and brawn of these young men and young women, so long will there be depression in its agriculture and so long will its young people, the greatest asset that any state can possibly have, leave for other sections.

The South has been overpopulated agriculturally. It needs a readjustment by a larger development of industrial employment and a larger consuming population of farm products before it can reach its full measure of prosperity.

### 12,000,000 VISITORS A YEAR AT ATLANTIC CITY.

EVERY visitor to Atlantic City becomes tremendously impressed with the enormous number of people always found there. An inquiry of the Chamber of Commerce of that city brings to the MANUFACTURERS RECORD a statement to the effect that it is estimated that during any 12-month period the number of visitors to Atlantic City is about 12,000,000. During July and August it is estimated there are between 300,000 and 400,000 visitors in the resort daily. Mr. Dilg, secretary of the Chamber of Commerce, adding to this, says: "Atlantic City is an all-year resort, and great numbers of visitors come here over week-ends, especially Thanksgiving, Christmas and New Year week-ends."

One does not have to go far back in memory to recall the time when Atlantic City was a comparatively small place with only two or three moderately good hotels and a vast sprinkling of very inferior ones. Today it is a city of hotels, great fireproof structures lining the beach front and accommodating thousands of visitors, who, winter and summer alike, flock to that place to enjoy its climate, but pre-eminently to enjoy its Boardwalk and the attractions of the stores along the Boardwalk. People who complain about high rates for Florida resort hotels, which are opened a few months a year, should study the rates of the big Atlantic City hotels which have a 12-month season.

Not every ocean-front city can duplicate Atlantic City in this respect, but there are a good many places where boardwalks might be erected which would prove relatively as powerful in drawing visitors as the wonderful Boardwalk of Atlantic City.

### AN EXPERT'S VIEW OF FLORIDA.

L. M. DRAKE of Daytona Beach, Fla., a well-known chemist, who has probably the best chemical laboratory in the state, is traveling continuously over Florida studying its material resources. His recent article in this paper on diatomite has already brought him a number of letters asking for additional information on the subject.

In the course of a letter written under date of November 9, Mr. Drake, with the conservatism of an expert on business matters, writes as follows:

"I recently visited the storm area of south Florida, as I did immediately after the storm had passed. The recovery is positively wonderful, and no visitor to Miami would know any storm had visited this phenomenal city had he no previous knowledge of any disturbance there last September. The last week of October saw more money and more business than the same week a year ago. As my interests take me continuously over the state, both by train and highway, I have been a close and careful observer. The trains are already crowded into south Florida. The highways are alive with visitors, all certain of the sure stability of the state; already I find hotels filled with guests.

"There are no economic or natural laws that operate specifically as to location, and this great state, brimful of possibilities economically sound, will soon take on, as has now commenced, a great wave of industrial activity such as you and I have visioned and advocated for years past, with scientific agriculture and horticulture and for the tourist business very important factors in the economic development.

"The storm area of south Florida suffered what it did because of feverish gambling instincts, which created hundreds of thousands of sheet-iron and pasteboard structures. Their destruction caused most of the loss of life. It was an aftermath of the speculation of 1925. Those who are loudest in any unjust criticism are the very ones whose operations ended in failure because of the moving of inevitable law, and who will in many cases, we hope in all cases, remain out of Florida.

"It has been conservatively estimated that the city of Miami would cover its entire city loss by \$600,000. It is also estimated, with good judgment, that \$25,000,000 will cover the entire storm area of 500 square miles, which you know was largely an uninhabited area. This means giving value to all the sheet-iron, pasteboard and cementless blocks. The loss of life alone is to be deplored, but these lives are not in vain, for there is already extensive and sound reconstruction going on, and there will be bigger and better cities because of the fine and great lesson learned that no gambling is economic, whether in money or lands and their improvements.

"Florida is smiling just now as after an invigorating bath. The state needs men of brains, workers and leaders in those avenues leading to honest, sound development. Capital never had a safer time to invest than now in things of construction. The speculators, however, will find cool reception for years to come. The industrial development of this most promising of states will call for a great deal of work, and whoever heard of a speculator or gambler working? To sum it up, what has happened to Florida accidentally during the past year is a great stimulant. Sound men meet adversities and checks with new grips. Just now all Florida has its sleeves rolled up high, and worthy capital is pouring in to identify itself with a state growing daily more economically sound.

"As to the diatomite article, every mail is bringing in letters relative thereto. I shall soon send you an article on the limestone industries of Florida. You will be astounded at the development of this great industry."

### IN DIVERSITY IS PROSPERITY.

CONCRETE and irrefutable proof that the dairy industry and diversified farming are potentially the greatest and most profitable industries of every nature for the South was given to the Rotarians in Montgomery, Ala., by W. C. Bowman, vice-president of the First National Bank, who said that Montgomery's dairy products were worth more than the cotton crop to the country.

"When you look at the dairy cows at the Alabama state

fair," said Mr. Bowman, "keep in mind that Montgomery county's dairy products (estimating milk at only 25 cents a gallon) are worth \$750,000 more than the total cotton crop of the county this year. You might recall that the increase in the poultry sold in Alabama last year amounted to \$8,605,000 and that Montgomery county sells more than five times as much poultry products as it did five years ago, and yet we do not average one hen to every 10 acres."

In short, Mr. Bowman urged diversified farming and declared that "cotton is only king when the farmers and business men love pleasure more than liberty."

If a banker in his counting room can grasp the realization of the great fact that diversified agriculture, including dairying and poultry raising, is a most profitable business venture, surely the farmers of the South should have no trouble in learning that conspicuous fact.

### THE UTILIZATION OF MANY RAW MATERIALS IN A TENNESSEE TOWN.

PRESIDENT J. F. JOHNSON of the Kingsport Improvement Corporation, Kingsport, Tenn., in a personal letter to the editor of the MANUFACTURERS RECORD, but which is published with his permission, wrote:

"A little incident occurred just a few days ago, somewhat typical of Kingsport, that will doubtless impress you as being a great departure from the day in the South in which you started your work. It was this: Mr. Palmer, president of the Kingsport Press, an industry here working about 700 people and producing an average of about 50,000 standard-sized books a day, was in New York, and while there received an order for 25,000 nicely bound books of approximately 500 pages. When he came back to Kingsport, the material for these books was corded up in great stacks of wood, much of which had come from the hills around Kingsport. In the space of sixteen days this wood was ground into pulp, the pulp made into paper, the paper into these well printed and bound books and the books shipped to the customer in New York, the work done almost entirely by the people of these Southern hills for whom you have been working so long.

"Recently I saw another thing quite interesting to me; I believe that it will interest you, too. I was in the plant of the Tennessee Eastman Corporation, a subsidiary of the Eastman Kodak Company of Rochester, N. Y. While talking to me, Mr. White, the manager, called some man of his organization, asking him to be sure to get out certain cars of prepared charcoal products to go to the Pacific Coast, leaving Kingsport that afternoon. I then learned that a good deal of this charcoal was made from the waste products of planing, flooring and sawmills located at Knoxville and Johnson City and other eastern Tennessee points, such material as is often burned in waste heaps, and which not long ago was the only way of disposing of it. It was brought to Kingsport, the alcohol and other wood chemicals taken from it, the residue—charcoal—was carefully prepared and shipped in lots of several carloads as far away as the Pacific Coast.

"These two cases show a fine change from the day when we shipped our resources as raw materials to make for other sections profits to which our people were naturally entitled. I do not know of anyone who has been so influential in bringing it about as your good self. Please come to see us."

What a wonderful story these facts tell of the utilization of raw materials from the tree to the finished book; from waste material of sawmills to charcoal for shipment to the Pacific Coast. But the greatest feature of it all is the utilization of the South's most priceless raw material—its own people, who are finding profitable employment in doing all of this work. These industrial plants, by creating employment for hitherto idle people, are great missionaries for education and for religion itself.

### SHOOT TO KILL SAYS POSTMASTER NEW AS TO MAIL ROBBERS.

POSTMASTER GENERAL NEW, in his annual report, suggests the death penalty for all mail bandits, urging Congress to enact legislation to impose the extreme penalty upon any man who undertakes to rob mails by firearms or who places the lives of postal employees in jeopardy.

It is doubtful if there will be any opposition throughout the country to this suggestion, except from the sentimental folks who think that crime should not be punished, but that the criminal should be coddled in his cell, if he should be so unfortunate as to be temporarily confined, and be bedecked with flowers from other sentimental cranks. But what a howl there would be if Secretary Mellon proposed the same degree of punishment for the rum-runners, who are practically pirates of the high seas, seeking to break down the Constitution of this country, and for the bootleggers who go prepared to murder whenever it may suit their convenience if somebody happens to stand in their way. And what a howl there would be if there should go forth through the land a demand that any highwayman who holds up an automobile and robs the passengers and jeopardizes their lives, or the burglar who breaks into a house and is always prepared to kill the occupants if they interfere with his intentions, should be treated as Postmaster General New wants to treat the men who rob the mails.

All of these people are equally guilty with the mail robbers. The mails are not more sacred than is a man's house; no more sacred than the Constitution of this country; no more sacred than the lives of bank clerks or others who are constantly endangered by the activities of the criminal element. The time has come in this country for rigid enforcement of law and the utmost penalty for every crime committed. Until this is done we shall have a continuation of widespread criminality. At the same time there must be such a determined spirit of law maintenance that men who violate law shall be made to realize that lawbreaking is the foundation on which criminality flourishes.

The Governor of Alabama and some of his associates were recently arrested because some one in the party had a supply of whisky in a fishing camp, and the men who were guilty of doing this were let off because in some way a negro was persuaded to plead guilty to the ownership of the whisky. He was fined and the rest went free. This stain upon Alabama is one which cannot easily be wiped out. The men in that party who were responsible for carrying the whisky into that fishing camp were law violators. They encouraged negroes and all others to be law violators. Neither the Governor nor those who were with him in the party have any right whatever to expect that murder will not increase; that robbers will not grow bolder; that defalcations will not increase, because the men who are guilty of these things have the action of the Governor and his friends as an excuse for what they may want to do.

The law violator, however high or low his degree, must be made to realize that in breaking the law he is breaking down the Constitution, breaking down government and doing all in his power to bring anarchy and chaos upon the country. It matters not how much by subterfuge he may try to escape the responsibility, the guilt is upon him.

Dairymen over the United States are interested in the cottonseed meal of the South because it is cheap. This might be a good time for North Carolina farmers to feed this high protein feed, reports the Agricultural Extension Service of North Carolina State College, and, we might add, for farmers also of any of the other Southern states.



# Waterways Improvement One of Most Important of Nation's Activities.

PROFITABLE RETURNS ON THE NATION'S WATERWAYS INVESTMENT IN SIGHT—COMPLETED PROJECTS ARE SAVING IN TRANSPORTATION COSTS TO THE PEOPLE OF THE UNITED STATES AN AMOUNT EACH YEAR EQUAL TO THE AGGREGATE COST OF THE IMPROVEMENTS.

By HOWARD L. CLARK.

Washington, December 9.

"Not a project but a policy," was the keynote of the Twenty-second Annual Convention of the National Rivers and Harbors Congress held in Washington December 8 and 9. If any doubters or skeptics in regard to the value of the national expenditures for the development of the country's waterways and harbors attended the sessions of the meeting they kept very silent in the face of a mass of facts and figures so ably presented to the Congress as to why the fullest development and utilization of the waterways were essential to the nation's progress and prosperity. There were over 350 registered delegates from all over the United States, about a hundred of them representing the Southern States, and in addition many visitors and others interested in the country's waterways and harbors. Withal it was one of the most successful meetings the Congress has ever held.

Many speakers forcibly brought home to those in attendance that, contrary to popular opinion, the amount of money spent by the Government on waterways development was not only beginning to show a return on the investment, but that through the cheaper transportation facilities provided, actual savings on completed waterways were annually greater than the entire amount which had been expended on their improvement.

In the opening address of the Convention, Secretary of War Dwight F. Davis—and the work of all the waterways improvements of the country is under the direction of the Secretary of War and the War Department—pointed out that approximately \$1,250,000,000 had been spent by the Federal Government upon improvement of harbors and waterways, with the result that there is now a saving of \$500,000,000 annually in transportation costs, which means a saving of over 33 per cent in the waterways total investment, demonstrating the soundness of the Government's development plan. For instance, he showed that every bushel of wheat shipped by water adds one cent a bushel to the price the farmer receives, with further savings to every consumer, and likewise savings were effected on cotton and other commodities handled by water. Secretary Davis explained that he was always a strong advocate of river and harbor improvement and he regarded the work as one of the most important of the nation's activities which devolves upon the Secretary of War. "This development is being pushed along steadily as fast as funds will permit," he said, "and I believe along sound business lines, which policy must be kept in mind.

"In 1925 a five-year program was adopted by President Coolidge, which called for the expenditure of at least \$50,000,000 a year for waterways development. That was a great forward step. The work of the Government and Army engineers in the development of the seacoast, Great Lakes and the vast inland systems of waterways gives evidence of efficiency. The War Department's comprehensive plan for the continued development of waterways is co-ordinated with the development of hydro-electric power, flood control and land reclamation, as well as navigation.

"Cheap transportation is essential to the country's agri-

cultural and industrial prosperity. It is impossible to improve all the waterways at once. However, Army engineers are preparing reports and recommendations for improvements with a total cost of over \$1,000,000,000. The early completion of great systems of waterways will effect a tremendous saving in our transportation bill. On completed waterways projects the annual savings in transportation costs are greater than the entire amount which has been expended in the past in their improvement."

Following Secretary Davis' address, Senor Don Manuel C. Tellez, Ambassador of Mexico, spoke on the waterways development of that country.

"Making Statistics Tell the Truth," was the subject of Senator Joseph E. Ransdell of Louisiana, one of the pioneers of the work of advocating the utilization and improvement of the country's waterways. Senator Ransdell emphasized the fact that such statistics which have been compiled in the past on waterways have not followed modern business principles. From the beginning, he said, river and harbor costs have been added to from year to year until the statistics present an aggregate expenditure of \$1,311,000,000, which included not only the initial costs but also the maintenance charges, and that no business, including the railroads, would follow this method in arriving at their capitalization. He cited the total expenditures and earnings of several of the completed waterways, which showed that they were operating far below the cost of handling such tonnage by rail, and thus were effecting a tremendous saving to the people of the country, beneficial to the farmer and other producers, as well as to the consumer. On the 'Soo' Canals," he stated, "there had been a saving amounting to eight times as great as the total cost of all the expenditures." As compared with railroad rates, Senator Ransdell said that freight on the Monongahela had been carried at a saving of 68 cents per ton, compared with all rail charges. Senator Ransdell urged that the Waterways Congress must get it into the minds of the people of the country to do more than they are doing to improve every river to the utmost degree.

At the close of the morning session on Wednesday, and immediately following the reading of the annual report of the National Rivers and Harbors Congress by Secretary and Treasurer S. A. Thompson of Washington, Congressman Riley J. Wilson of Louisiana, President of the Congress, spoke on the work of the organization and emphasized the necessity of continued effort to secure the establishment of adequate equipment and modern terminal facilities. In the course of his address, he said:

"In all its work, so essential to the public welfare, the National Rivers and Harbors Congress has provided a national forum for discussion and an opportunity to co-ordinate the plans and work of all the persons and organizations interested in and back of the movement for the improvement and utilization of our waterways. The result has been a mutual understanding of each other's aims and efforts. This will continue to be the policy of the Congress in order that it may remain in the service of the nation as a whole.

"Without in any way detracting from the things achieved,

I wish to call your attention to the fact that we must not, unless we wish to lose the ground gained, slacken our efforts. Militant advocacy of the waterway program is just as essential now as ever. The gains made must be consolidated and used as a base for further efforts. An adequate annual appropriation must be kept up, that the development and improvement work may continue in an orderly way to completion.

"However, with the sentiment so favorable to an economic development of our water resources, it seems to me that, in addition to continued effort toward completion of the approved program, the time has come for us to look forward to the next great step.

"In harbor improvement work, port competition has hastened the installation of efficient and economical terminal equipment. The Great Lakes system has attained an almost unequalled position in low-cost terminal and interchange facilities. The strictly inland waterways have been slower in the provision of suitable equipment of this kind.

"From the transportation viewpoint a completed waterway, unless served by adequate equipment and terminals, is almost wholly useless. In the provision of such equipment the problem is not to provide equipment of any kind that comes to hand, but that which gives the lowest transportation and handling costs. Such equipment is necessary to weld the waterways into and make them an integral part of our national transportation system.

"It is not an idle statement to say that it is necessary that such terminals give the lowest possible cost of handling. This is true because the waterway carrier pays the cost of loading and unloading the goods he transports. Even if he does not pay directly, still he pays it just as surely as if he did pay directly.

"So far as the line haul cost alone is concerned it is certain that the water carrier can profitably serve the public at a cost lower than any other transportation agency. But if the saving in this be swallowed up in exorbitant and useless loading and unloading costs, this initial advantage is lost. Take, for instance, a shipment of goods between two points, each of which is served by both rail and water. The shipper, if the time element is not dominant, will naturally choose the cheaper route. In competing for this shipment the waterway carrier or the shipper, as the case may be, must figure in the terminal costs, and if the waterway carrier is under the handicap of inefficient terminals, he cannot get the business, nor can the public benefit from the lower cost which the waterway should be able to give.

"The importance of this question of terminal costs can be more thoroughly appreciated when you consider that in merchandise shipments (which probably furnish the fairest basis of comparison between terminals) there is a difference of as much as \$1.09 per ton in handling costs among the six largest terminals on the Mississippi River System below St. Louis. Using the same terminals and stating the figures another way, it costs two and one-sixth times as much to handle a ton of merchandise at the most inefficient of these terminals as at the one showing the lowest cost. The same comparison between the average cost on all commodities at these terminals shows that in the most expensive one it costs two and one-half times as much to handle a ton as at the cheapest.

"There are, of course, terminals with special equipment for handling a particular commodity, such as steel, or ore, or grain, and where the handling cost for the special commodity is extremely favorable, but these do not furnish support for a fair comparison.

"When you see that every ton handled in a particular terminal, and I am speaking now of an average of all commodities, costs at least eighty cents more than is necessary, the burden is obvious.

"Many of the larger shippers have furnished their own terminal facilities. Their vision and courage are to be commended, but these facilities do not solve the problem for the public.

"The Government is spending approximately \$25,000,000 a year on the improvement of our inland waterways. It therefore seems to me that it is incumbent upon us, and particularly so because of our responsibility toward this expenditure, to devote ourselves to a campaign for the promotion of the installation of the floating equipment, terminal and inter-

change facilities that are necessary to bring to the public the advantages which should flow from this expenditure on the part of the Government.

"Public terminal and interchange facilities of a modern and efficient type are a necessity. By 'public' I mean available for common carriers and anyone else who wishes to use them and pay the necessary charges. We can, both as individuals and as an organization, do much toward securing the installation of these plants where necessary, and it is my impression that we are duty bound to do our utmost to forward this work which is so necessary to an economic utilization of the waterways we have demanded and which are being provided.

"We have been proceeding upon the basis that appropriations for rivers and harbors constitute an investment by the Government for and on behalf of the public. As projects are being completed and up-to-date craft put into operation on all-year channels served by modern terminal and interchange facilities, we are demonstrating to the public—the taxpayers—that the day of profitable returns is at hand."

Another important address of Wednesday was that by Major General Edgar Jadwin, Chief of Engineers of the United States Army, who has direct charge of the War Department's work on waterways development and activities. General Jadwin spoke on "A National Waterway Plan," and said in part the following:

"Congress is the Board of Directors of this huge corporation we call the United States, and the people are the stockholders. Associations such as yours represent important interests of the stockholders, for upon you rests in a large measure the duty of crystallizing the opinion of the people and giving expression to their desires. Your responsibilities and the responsibilities of the War Department in connection with waterway improvements are heavy, and it is therefore most appropriate that we meet, discuss our problems, voice our opinions and exchange our views.

"The American plan for the improvement of its harbors and navigable waterways is comprehensive and complete and at the same time it is flexible. It was not built in a day but was a matter of growth. This was of necessity so, for it would manifestly have involved a waste of public funds to undertake the improvement of all waterways at once, some prematurely and regardless of the economic needs. We are substantially up to date in considering new works for recommendation to Congress and nearly so in carrying out the main projects already approved by Congress. Although in this plan navigation has received the primary consideration of Congress, and therefore of the Army Engineers, flood control, power development and irrigation are being given their proper place in studies and plans looking to the improvement of our waterways. Let us look first at the plan as applied to the principal classes of work for the improvement of navigation: Seacoast Harbors, Great Lakes Harbors and Channels, the Panama Canal, the Mississippi River System and other waterways.

"The plan for developing our seacoast harbors provides harbors sufficient in number and of such characteristics and so distributed to meet the needs of our foreign and coastwise commerce.

"We have spent about \$465,000,000 to date upon some 200 harbors and there still remains to be done, in order to complete existing plans, work totaling in cost about \$110,000,000. The commerce moved over our harbors in 1925 was over 300,000,000 tons. The benefits derived from our seacoast harbors are vital. Upon them is dependent our entire overseas trade. Upon this trade is dependent to a large extent our economic growth and prosperity.

"The price received by the farmer for his wheat depends upon the price of this grain in Liverpool. Saving several cents per bushel on the ocean rates therefore increases his receipts by the same amount not only for the grain actually exported but for the grain sold for domestic consumption. Deeper harbors and cheaper ocean rates increase the profits on all exports sold in foreign markets—whether manufactured in the East, West, South or North.

"The plan for our Great Lakes is to provide harbors and channels with such depths, widths and other physical characteristics as to permit the economical movement of the vast natural resources tributary thereto.

"The present authorized depths are, in general, such as to accommodate vessels of 20-foot draft.

"The work to date has cost \$160,000,000. The traffic (totaling 130,000,000 tons in 1925), and consisting principally of such bulk commodities as iron ore, coal and grain, is a fair index of the importance to the nation of this system.

"The annual savings in the transportation costs on the



Lakes are also greater than the entire first cost of all the improvements that have been made.

"It is apparent that great relief will be afforded to the Middle West if a deep-sea connection be made from the Great Lakes to the sea. A joint board of Canadian and American engineers have been studying the improvement of the St. Lawrence for two years. This board consisted of three Canadian engineers and three American engineers—the latter from the Corps of Engineers of the Army, the speaker being chairman of the American section.

"As a result of the studies, the joint board has submitted plans for a 25-foot waterway at present, with the sills of the locks at 30 feet, so that the waterway can be deepened to 30 feet if necessary.

"The plan is to improve this system of natural waterways in our great interior basin so as to provide channels adequate for the traffic, but limited to the extent of reasonable engineering possibilities. Considering only the main arteries of the system, the Mississippi to St. Paul, the Ohio system, the Missouri to Kansas City, the Illinois River route to Chicago and the Intercoastal Canal to Louisiana, Texas, Mississippi and Alabama ports, there have been expended to date over \$300,000,000 for the improvement of navigation and there remains to be done work totaling over \$50,000,000, not including any work not yet approved by Congress.

"In a few years we may look forward to a continuous navigable waterway 9 feet deep from Pittsburgh, Pa., and St. Louis, Mo., to Houston, Texas, with many thousands of miles of tributary feeders not less than 6 feet deep.

"The benefits of this system go primarily to the people in the Intermountain States, although somewhat to people further east and further west.

"To summarize all the work of river and harbor improvement constructed in the continental United States have cost approximately one and a quarter billion dollars for navigation. The annual savings in freight bills are over one-half billion dollars. The customs receipts of the country through the harbors are also half a billion dollars per day. In addition, the country has received from these waterways benefits other than coldly stated freight savings, which it is difficult to evaluate, but which have been vital factors in its growth and prosperity. These works are constructed by the Army engineers under the Secretary of War.

"That our national waterways and the plans for their improvement are now being received favorably throughout the country—more favorably than ever before—is a matter of much gratification, I know, to all of you, who, like myself, have been connected with the work in one way or another for so many years. At the same time it imposes upon us the necessity for being particularly careful. We must not forget the old caution—'Beware when all men speak well of thee.'

"You can readily see that while the national plan is comprehensive and provides for the expansion of our great interior systems of waterways, it is out of the question for the Government to assume at one time the enormous financial burden that would be thrown upon it if we attempted to improve all waterways at once. It is essential that we use every effort and every dollar available to complete existing systems.

"The river and harbor act of March 2, 1919, by imposing certain restrictions upon the letting of contracts, indicates clearly that Congress intended that some Government plant was to be used and that contracts were not to be let at figures greatly in excess of the estimated cost of the work with Government plant. On the other hand, certain interests are urging legislation which would prohibit the use of Government plant entirely and require that all work be done by contract. I am not in favor of purchasing or building up a huge amount of Government plant and equipment, but long experience with river and harbor work extending over a period of 36 years has convinced me that the Government must have some plant of its own and must actually perform some of the work. You gentlemen are familiar with the character of the work and the conditions under which it is performed. I believe you will agree with me in the conclusion that any effort to impose rigid restrictions upon the means to be employed will result in delay and increased costs. The whole point is that we must be prepared to handle the work within a reasonable time either by hired labor and Government plant or by contract, and actually do it by the method which gives the taxpayer the best return for his money."

Brig. Gen. T. Q. Ashburn, chairman and executive, Inland Waterways Corporation, spoke on the subject, "From Deficits to Dividends." General Ashburn said that it will cost the

railroads \$1,000,000,000 annually for 10 years to meet increased transportation at the end of that time. "Water transportation," he said, "should be utilized to save some of this enormous expenditure. Rail, highway and waterway transportation must be co-ordinated in order to benefit not only the transportation interests but the public at large. The present waterways development has resulted in extending the benefit of lower rates to 42 States. Over 65 per cent of the tonnage carried does not originate on the water, nor does it end there. Railroads bring it in and carry it out, and we have no quarrel with the railroads, but are looking to the least expensive methods of transportation that more and more people may be benefited." He further stated that during 1926 the Mississippi River carried as much traffic as it ever handled during its greatest era, between 1880-1889. Since then freight traffic on the Mississippi dwindled to practically nothing in the years preceding the World War, but with the impetus given by the demand for increased transportation facilities during and following the World War the resulting development of waterway traffic on the Mississippi has shown the wisdom of the plan adopted for its proper utilization.

Other addresses on the program included "Line Haul Versus Terminal Charges," by J. Spencer Smith, Tenafly, N. J., president of the American Association of Port Authorities; "Portland, the Port and Harbor," by James H. Polhemus, general manager and chief engineer, of Portland; "The Water Caterpillar," by Carl J. Baer, St. Louis, Mo., president Standard Unit Navigation Co.; "A Survey of the Tennessee and Its Tributaries," by Lieut. Col. Harold C. Fiske, Corps of Engineers, U. S. Army; "The Business Man and Water Transportation," by John H. Small, Washington; "The Port of Houston," by Thomas H. Ball, counsel Houston Port District; "Port Administration Within the Port of Hampton Roads," by J. Gordon Bohannon, Petersburg, chairman of State Port Authority of Virginia; "Federal Regulation of Water Lines," by A. H. Ferguson, New Bedford, Mass., manager Bureau of Transportation, Board of Commerce, and "Shall the Interstate Commerce Commission Control Our Waterways and Highways?" by Joseph N. Teal, Portland, Oregon.

Nearly 100 delegates to the National Rivers and Harbors Congress appeared before President Coolidge at the White House and outlined to him the resolutions adopted by the congress. Among these resolutions was the one which Congress had adopted in opposition to the control of waterway traffic by the Interstate Commerce Commission and also opposed the removal of the work of improving waterways from the Engineering Corps of the Army.

A feature of the meeting was the annual banquet held on Wednesday evening, with Gen. Charles G. Dawes, Vice-President of the United States, as toastmaster. Among the speakers were James Francis Burke, former Representative from Pennsylvania, and J. Thomas Heflin, United States Senator from Alabama.

Congressman Riley J. Wilson, Ruston, La., was re-elected president of the National Rivers and Harbors Congress for the ensuing year, and S. A. Thompson, Washington, D. C., was elected secretary and treasurer for the fifteenth time.

The vice-presidents of the organization are allocated one to each State, and those representing the South include:

George G. Crawford, Birmingham, Ala.; H. D. Tomlinson, Butler, Ark.; H. W. Beaman, St. Petersburg, Fla.; William W. Williamson, Savannah, Ga.; D. B. G. Rose, Louisville, Ky.; Jos. A. Humphreys, Houma, La.; Howard W. Jackson, Baltimore, Md.; C. C. Moody, Indianola, Miss.; Walter S. Dickey, Kansas City, Mo.; R. C. Job, Elizabeth City, N. C.; J. S. MacElwee, Charleston, S. C.; C. S. E. Holland, Houston, Texas; A. G. Schwarzkopf, Norfolk, Va., and W. A. Werninger, Huntington, W. Va.

## \$65,477,365 RECOMMENDED FOR RIVERS AND HARBORS.

### Chief of Army Engineers Submits Report to Congress—Asks \$17,670,000 for Mississippi River.

Washington, D. C.—A total of \$65,477,365 has been recommended for inland harbors, waterways and rivers by Maj. Gen. Edgar Jadwin, Chief of Engineers of the United States Army, in his annual report submitted to Congress. The recommendations cover estimates for general river and harbor work for the fiscal year beginning July 1, 1927, estimated at \$54,459,365, in addition to \$11,018,000 which will be required for flood-control work, surveys and other purposes.

Of the total amount recommended for expenditure, \$17,670,000 has been asked for the Mississippi River, while \$6,405,000 has been recommended for New York harbor and \$5,500,000 for the Ohio River. Other large items include \$3,431,000 for Philadelphia and the Delaware River; \$2,550,000 for the Missouri River; \$2,000,000 for the Hudson River in the vicinity of Albany and Troy; \$2,000,000 for the Louisiana-Texas intracoastal canal between New Orleans and Galveston; \$1,000,000 for the Sabine-Neches waterway; \$1,500,000 for the Allegheny River and \$1,000,000 for the Sacramento River.

The following recommendations have been made for Southern work:

Baltimore District—Baltimore harbor and channels, \$460,000 (including enlarging Fort McHenry anchorage, \$205,000; Ferry Bar channel, \$75,000; Spring Garden channel, \$90,000, and upper anchorage adjacent to Fort McHenry channel, \$45,000).

Washington District—Potomac River at Washington, \$10,000; below Washington, \$150,000; Occoquan Creek, Va., \$6000; Nomin Creek, Va., \$14,500; Rappahannock River, Va., \$22,000; Mattaponi River, Va., \$8600; Pamunkey River, Va., \$8600.

Norfolk District—Norfolk harbor, \$640,000 (including dredging in Southern Branch of Elizabeth River, \$191,459; Eastern Branch of Elizabeth River, \$135,454; harbor, channels redredging, \$192,000); Thimble Shoal channel, \$180,000; James River, redredging channels between Richmond and mouth, \$50,000; Appomattox River, \$10,000; Pagan River, \$2000; Nansemond River, \$2000; inland waterway, Norfolk to Beaufort Inlet, N. C., \$800,000 (including extending Alligator River-Pungo River land cut \$375,000, building three bridges on Alligator River-Pungo River land cut, \$255,000; building six houses for bridge tenders, \$48,000, and redredging between Norfolk and Albemarle Sound, \$140,000; Blackwater River, Va., \$3000; Meherrin River, N. C., \$3000; Roanoke River, N. C., \$3000; Scuppernon River, N. C., \$3000).

Wilmington (N. C.) District—Pamlico and Tar rivers, N. C., \$12,000; Neuse River, \$12,000; Contentnea Creek, \$1500; Trent River, \$800; Beaufort, N. C., harbor, \$15,000; waterway, Core Sound to Beaufort harbor, \$5000; inland waterway, Beaufort to Jacksonville, N. C., \$10,000; Morehead City harbor, \$5000; Beaufort Inlet, \$30,000; Cape Lookout harbor of refuge, \$3000; Cape Fear River, at and below Wilmington, \$190,000; above Wilmington, \$12,000; Northeast River, \$4000.

Charleston (S. C.) District—Winyah Bay, \$30,000; Waccamaw River, \$4000; Great Pedee River, \$4000; waterway, Charleston to Winyah Bay, \$7700; Santee River, \$6000; Charleston harbor, \$95,000; Shipyard Creek, \$1600; waterway, Charleston to Beaufort, S. C., \$74,500.

Savannah District—Savannah harbor, \$800,000, Savannah River below Augusta, \$21,000; waterway, Beaufort S. C., to St. Johns River, Fla., \$83,000; Altamaha River, \$75,000; Oconee River, \$8000; Ocmulgee River, \$12,000; Brunswick harbor, \$144,000; Satilla River, \$5700; St. Mary's River, \$4200; Fernandina harbor, \$2000.

Jacksonville District—St. Johns River, Jacksonville to

ocean, \$600,000; Indian River, \$25,000; Miami harbor, \$700,000 (including refund to Miami on account of funds advanced for prosecution for 25-foot project dredging work, \$500,000); Caloosahatchee River, \$25,000; Sarasota Bay, \$10,000; channel, Clearwater to Tampa Bay, \$10,000; Anclote River, \$10,000; Withlacoochee River, \$12,000; Tampa harbor, \$125,000.

Montgomery (Ala.) District—Carrabelle bar and harbor, Fla., \$51,000; Apalachicola Bay, \$18,000; Apalachicola River, \$10,000; Flint River, \$45,000 (for work between Albany, Ga., and mouth); Chattahoochee River, \$75,000; channel, Apalachicola River to St. Andrews Bay, \$5000; St. Andrews Bay, \$5000; Choctawhatchee River, \$42,000; Blackwater River, \$1000; Escambia and Conecuh rivers, \$1000; Pensacola harbor, \$8000; Alabama River, \$75,000.

Mobile District—Mobile harbor, \$437,500; channel between Mobile Bay and Mississippi Sound, \$20,000; Black Warrior, Warrior and Tombigbee rivers, \$17,000 (including payment for land submerged by backwater above Dam No. 17, \$5000); Tombigbee River, mouth to Demopolis, \$19,500; Bayou Labatre, \$5000; Pascagoula harbor, \$33,000; Gulfport harbor and Ship Island Pass, \$175,000; removing water hyacinth Mobile River and tributaries, \$3750.

New Orleans District—Southwest Pass, Mississippi River, \$420,000; Bayou Plaquemine, \$8000; Bayou Teche, \$33,000; Louisiana-Texas intracoastal waterway, New Orleans-Sabine River section, for new work, \$1,000,000; removing water hyacinth, Louisiana, \$24,000.

Galveston (Texas) District—Sabine-Neches waterway, \$1,000,000; Louisiana-Texas intracoastal waterway, Sabine River-Galveston section, \$1,000,000; Galveston harbor, \$129,000; Galveston channel, \$248,000; channel, Galveston to Texas City, \$267,500; channel to Port Bolivar, \$20,000; Houston ship channel, \$1,110,000; Double Bayou, \$12,200; Anahuac channel, \$21,000; Turtle Bayou, \$14,700; Trinity River, \$21,780; Cedar Bayou, \$12,200; Clear Creek, \$6600; Dickinson Bayou, \$12,200; Freeport harbor, \$75,000; West Galveston Bay and Brazos River channel, \$21,530; channel Brazos River to Matagorda Bay, \$34,500; channel, Pass Cavallo to Aransas Pass, \$18,000; channel Aransas Pass to Corpus Christi, \$268,000; Port Aransas, \$127,000; Brazos Island harbor, \$178,000; Cypress Bayou and waterway between Jefferson and Shreveport, \$10,000.

Vicksburg (Miss.) District—Red River, below Fulton, Ark., \$34,000; Ouachita and Black rivers, \$42,000; Tensas River and Bayou Macon, \$5000; Boeuf River, \$5000; Bayou D'Arbonne and Corney, \$2000; Yazoo River, \$15,000; Tallahatchie and Colowater rivers, \$8000; Big Sunflower River, \$8000.

Memphis District—Arkansas River, \$39,000; White River, \$72,500; Black River, \$51,250; Current River, \$20,675; St. Francis and L'Anguille rivers and Blackfish Bayou, \$16,500.

St. Louis District—Mississippi River, between the Ohio and Missouri rivers, \$3,000,000; Mississippi River, removing snags below Missouri River, \$20,000.

Kansas City (Mo.) District—Missouri River, Kansas City to mouth, \$2,500,000 (for continuing work for existing project of 6-foot channel); Kansas City to Sioux City, Iowa, \$20,000; Sioux City to Fort Benton, Mont., \$30,000; Osage River, \$15,000.

Nashville (Tenn.) District—Cumberland River, below Nashville, \$10,000; above Nashville, \$5000; Tennessee River, below Riverton, Ala., \$150,000.

Chattanooga (Tenn.) District—Tennessee River, above Chattanooga, \$30,000; Chattanooga to Hales Bar, \$20,000.

Florence (Ala.) District—Tennessee River, Browns Island to Riverton, Ala., \$10,000; operation and maintenance of Muscle Shoals dam and hydro-electric development, \$200,000.

Lock and dams on Ohio River—For new work, \$8,250,000, including Deadman Island lock and dam, construction of lock walls, \$1,000,000; construction of dam at No. 41, Louisville, \$1,200,000; completion of No. 46 at Owensboro, Ky., \$600,000; completion of No. 47 at Newburg, Ind., \$1,000,000; completion of No. 49, near Uniontown, Ky., \$100,000; construction of dam No. 50, near Weston, Ky., \$900,000; construction of dam No. 51, near Golconda, Ill., \$1,150,000; completion of No. 52, near Brookport, Ill., \$1,000,000, and construction of dam No. 53, near Joppa, Ill., \$1,300,000.

Mississippi River Commission—To provide a safe and adequate channel for navigation and for flood control from the mouth of the Ohio River to the head of the passes, \$10,000,000.

City Council of Greensboro, N. C., plans to sell December 21 a bond issue of \$1,420,000 for street, sewer, water and other improvements.



# Vast Wealth South in Raw Materials.

VISITING CHEMICAL ENGINEERS SEE GREAT INDUSTRIAL DEVELOPMENTS NOW UNDER WAY IN THIS SECTION.

By RICHARD WOODS EDMONDS.

Atlanta, Ga., December 11.

Attracted by the rapid industrial progress that is being made in the South, the American Institute of Chemical Engineers turned to this section as the location for its nineteenth annual meeting, and during the week of December 6-10 125 members and guests visited some of its chief industrial centers. Starting at Birmingham on Monday the 6th, the institute divided its time between visits to the great steel plants of the United States Steel Corporation and other industries of the city and a session for the reading of papers on chemical subjects.

Gustav Egloff, presenting a paper prepared in collaboration with Jacques C. Morrell, described a source, long known but not yet exploited, from which we may obtain fuel for our internal-combustion engines long years after the present known sources of natural petroleum shall have been exhausted. "One of the greatest known hydrocarbon deposits in the world today is that of the Canadian Alberta bituminous sands," said Dr. Egloff. "The known bituminous sand deposits are estimated to contain over 100,000,000,000 barrels of bitumen. When the economic demand is high enough for gasoline the Alberta bitumen can be converted into over 35 per cent of high anti-knock motor fuel by the cracking process. The quantity of gasoline obtainable from the known deposits of Alberta bitumen would be more than 35,000,000,000 barrels, or enough gasoline to supply the present world demand for over 100 years. The cracking of Alberta bitumen not only yields a high per cent of gasoline, but also fuel in the form of gas and coke. The cracking of 100,000,000,000 barrels of Alberta bitumen will produce 100,000,000,000 cubic feet of gas having a high thermal value. The coke produced will amount to approximately 7,000,000,000 tons."

At 1 o'clock on Tuesday the party boarded a special train for Atlanta via Anniston, where a stop of three hours and a half was used to visit the important electrochemical plant of the Federal Phosphorus Company.

In Atlanta on Wednesday and Thursday the time was divided between industrial plants and points of interest and sessions in the auditorium of the Atlanta Biltmore, the Atlanta headquarters of the meeting. Besides the highly technical papers to be expected of a meeting of chemical engineers, a few of more general interest were presented. William Miller Booth, consulting chemical engineer of Syracuse, N. Y., in discussing "Location and Markets," illustrated a point in his argument by the statement that "we expect to use artificial cotton and wool made from wood as a base. The whole textile trade will be transformed before our chemists and engineers finish their work."

Mr. Booth, in company with a good many other chemists, foreshadows a time when our cotton fields and pastures are expected largely to give way to intensively cultivated stands of pine. But to get to Mr. Booth's main theme the speaker said:

"It seems entirely logical that your raw materials should be elaborated to finished products with the added values thus obtained. Wherever your towns enter manufacturing with a well-made product and an active market you will witness a marked change in the entire business attitude of the place. This is due, first, to organized effort and a demand for skilled labor; secondly, to a weekly money distribution and an active market for all supplies used in the home.

"Contact with the outside world increases local pride, and business blocks are followed by banks, parks, libraries and

beautiful residences. You cannot carry on any industry in competition with the North without good business men, technical men and willing workmen. The Southern man is a natural executive. You must educate engineers, geologists, chemists, inventors and trained industrial leaders. We place the basis of any success you may attain in the education of your young men. They must be prepared to harness your power, construct your roads, build your mills and wrest the ores from your mountains. From raw materials to finished products your great natural resources, wrought and made useful, will feed and clothe your people and will add to your prosperity and happiness.

"We recommend our method of location study that you may search for natural resources and determine what can be produced at a profit and that may be exchanged for products of our Northern mills. Commerce thrives upon the exchange of commodities. Send salesmen to the North and open offices in that territory. Invite Northern salesmen to visit your cities and give them an example of true Southern hospitality. An industrially active South will become a great national asset, and none will derive greater benefit than its own people."

Readers of the MANUFACTURERS RECORD are thoroughly familiar with the excellent advice given in the closing sentence of this quotation.

"The Atlanta District as a Location for Chemical Plants" was the subject discussed by Andrew M. Fairlie, consulting chemical engineer, of Atlanta.

"Atlanta does not yet claim to be the center of a great and diversified chemical industry," Dr. Fairlie said. Nevertheless, certain natural advantages for chemical manufacture have caused to be included in the 1500 products of the Atlanta district a considerable number that are either distinctly chemical products or that depend upon chemical processes, those enumerated by the speaker being fertilizer, soft drinks, carbon dioxide, epsom salts, sulphuric acid, paints, ink, lead pencils, flavoring extracts, leather soap, rubber goods, etc.

"Are there any good reasons why industries manufacturing chemicals or using chemical processes should locate in the Atlanta district?" This was the question Dr. Fairlie set himself to answer. By way of introduction, he pointed out that "many factors enter into the choice for a location for an industrial plant. Perhaps the most urgent are the existence of local resources that demand exploitation and the presence of an active local demand for certain products." Throwing this into the shape of a chemical equation, the speaker said: "Local resources plus local markets equals industrial plants." He then enumerated and discussed in some detail each of the following resources of this section as bearing upon chemical as well as any other form of manufacture: Climate, topography, health, water supply for industrial as well as for human consumption, labor, housing conditions, cost of living, educational facilities, sanitation, power, fuel, taxation, construction costs, factory sites, railway facilities, markets and resources.

The subject of resources was treated at considerable length, the large quantities of raw materials suitable for chemical processes being discussed. They are cotton and pulpwood for cellulose manufacture, naval stores, limestones, clays, bauxite and feldspar; paint materials, such as ocher, whiting, barytes and its derivative, lithopone, graphite, asbestos and linseed oil.

"These," said the speaker, "are the general factors on which a consideration of the suitability of a location must be based." As to the establishment of any particular plant,

"a valid decision for the manufacture of this or that product can be reached only after a painstaking and thorough examination of all pertinent conditions has been made and a report submitted by competent engineering counsel."

On Thursday evening the party took a special train for Copper Hill, Tenn., where visits included copper mines, flotation plant and copper smelter. The meeting ended there and the members departed by different routes for their homes, taking with them reinforced convictions or enlarged understandings of the immense possibilities for development of the South.

Some of the members who had never before been South were deeply impressed by the great stretches of unsettled or sparsely settled territory. "I can understand now what you mean," said one man, "when you say the reserves of white labor still on the farms are actually greater now than they were 25 years ago and are still growing in spite of your rapid industrial development. Compared with your vast agricultural regions and your equally vast uncleared forest land, the industrial districts are trifling. You can continue to multiply your rural and industrial populations for years to come without filling up the country."

Sitting at lunch between E. L. Wilson of the Rumford Chemical Company and James R. Withrow, consulting chemical engineer and professor of industrial chemistry, Ohio State University, I asked them what they considered the most conspicuous feature of the industrial situation in this section. Without hesitation they both agreed that it was the extraordinary abundance of power, both developed and undeveloped, in the shape of hydro-electricity and electricity from cheap local coal.

"This is a wonderful country," said Mr. Wilson. "Its power resources are unlimited, for when the day comes, as it probably will, that your water-power is fully utilized, you will still have unlimited reserves of coal from which you can generate power almost, if not quite, as cheaply. Because of this abundant power, your other resources and your large local markets you have industries here now that could not succeed in other parts of the country, and you will have far more. For example, that Federal Phosphorus Company plant we saw yesterday in Anniston could not exist in New England. It brings its phosphate rock by rail and at a cost of 60 cents per ton more than we have to pay for the same rock in our plant in New England by water, but it has cheap power and its market is all around it. The cost of electric power would be prohibitive for that process in New England. (Federal Phosphorus Company is the Alabama Power Company's largest customer.) It could not exist anywhere else. On the Pacific Coast or at Niagara, where power is cheaper, the freight charges would be too great."

D. D. Jackson, professor and executive officer of the chemical engineering department of Columbia University, declared the possibilities of the section to be superb. Naturally, he was particularly interested in his visit to the Georgia School of Technology. He found it had a fine location and excellent buildings, but declared the value of the whole investment could be doubled by a comparatively small expenditure for equipment. In his courses at Columbia he gets many Georgia Tech men, and finds them to be an exceptionally fine type. "They are this country's greatest resource," he said. "The State should spend money freely for their training and Southern industries should then find ways to keep them at home, for it is upon them you must depend for the development of your other resources."

Charles L. Reese, chemical director of E. I. du Pont de Nemours & Co., has long been familiar with the South. He considers all the industrial activity that has taken place in the section so far to be only a beginning, only an index to what is to come. And Burrows Morey of the Larkin Com-

pany, Inc., Buffalo, said that if he were a young man just out of college he would undoubtedly head South.

Men who were already familiar with the South, as a majority of the party were, commented frequently and emphatically upon the marked improvement in the appearance from the train windows of the farms and farm homes along the way. Homes looked better kept and better painted. Fences were in better repair. The whole aspect of the scenes spoke clearly of increasing prosperity and the increasing spirit of pride and progress. The meeting was declared by many members to be the best they had ever attended, and without doubt they went home with heightened interest and faith in the South.

### Building Dam and Lake for Land-Development Project in Georgia.

A concrete arch dam forming a lake of 30 acres has been completed at Sylvan Lake Falls, Mountain City, Ga. The falls tract consists of about 400 acres, located in the mountains of northwest Georgia; it is being developed as a summer residential colony by Dr. Holmes Mason of Macon, Benjamin Flemister of Milledgeville, Ga., and L. C. Dotson of Mountain City, Ga.

The tract included a valley forming a natural basin for a lake and a natural site for a dam; construction of a lake was



ARCH DAM AT MOUNTAIN CITY, GA.

decided on to add to the attractions and the value of the property. The firm of Whitman, Requardt & Smith, engineers, of Baltimore and Macon, was commissioned to handle the engineering work on the development, including the laying out of roads, staking out lots and constructing the dam, which is 25 feet high, 200 feet long and set in rock for its entire length. Water from the spillway falls into a stilling pond, which will be used as a wading pool. From the pond the water falls over a series of rock boulders, forming a cascade descending 100 feet to a plain below.

### Propose Improvements From New Orleans—\$7,500,000 Bond Issue.

New Orleans, La.—Proposed improvements contemplated by the city of New Orleans as a result of its favorable vote on a bond issue of \$7,500,000 include the following: Paving and sub-surface work, \$1,200,000; new criminal courts building, \$500,000; new parish prison and house of detention, \$750,000; incinerator and garbage-collection system, \$1,250,000; city park extensions, \$1,800,000, and municipal auditorium, \$2,000,000. The paving item is only for the city's proportion of paving, confined to intersections and sub-surface drainage work; the remainder will be done by property owners.



# Engineers Active at Power and Mechanical Exposition.

By GEORGE GARNER.

New York, December 11.

In itself regarded as the greatest affair of its kind in the annual series, the fifth Exposition of Power and Mechanical Engineering Equipment, held throughout this week at the Grand Central Palace, was made even further interesting by conventions held by organizations interested in that and collateral lines. At the show were presented machines of many kinds and accessories; in the professional conferences were discussed the best methods of utilizing these mechanical devices, and conditions which call for the exercise of even greater American mechanical ingenuity.

For one, the American Society of Mechanical Engineers was in session five days of the show period in its forty-seventh annual meeting. The American Society of Refrigerating Engineers held its twenty-second annual meeting on Monday, Tuesday and Wednesday, and the Taylor Society met in annual gathering Wednesday, Thursday, Friday and Saturday. All of these gatherings, both in general meetings and in group sessions, were regarded as of great value to the participants and to American industry in general. Also moving pictures showing industrial processes and engineering achievements in the United States in the past year gave concrete idea of the progress made in engineering in many lines.

Of particular interest to the South was the meeting of the refrigerating engineers, many of whom now are engaged in the development of the ice and refrigerating industries in that section and others of whom are turning their attention in that direction as a most promising field. The cordial feeling prevailing between ice-manufacturing interests and mechanical refrigerating interests was evident, and the motive which should move all was thus expressed by Fred Ophuls of Ophuls & Hill, Inc.:

"It is unfortunate that so many operating engineers consider it a criticism of their knowledge and ability when they are shown or some one tries to show them means and ways by which the operating methods, also the efficiency of their plants, can be bettered. They take a wrong view of the situation. The modern and most efficient operation, as it is understood today, requires the co-operation of the chief engineer with a technically trained engineer to realize the best possible results. It is no reflection at all on the former, for there are happenings in the running of all power plants that need careful technical study and then a schooling of the operators to overcome this difficulty. This viewpoint of the operators is often fostered by the owners or the management at their own expense. The operator who takes council not only helps his employer but also himself."

Co-operation also was the keynote of an address by Charles M. Schwab, chairman of the board of the Bethlehem Steel Company, at the annual dinner of the mechanical engineers.

"The real aristocrat of today," said Mr. Schwab, "is not the man of birth or social position, but one who does something for the benefit of humanity. Nothing in my long lifetime of active work has given me such satisfaction as the appreciation of those I have labored with. Money isn't everything, and there comes a time when it means little, but the appreciation of those you have worked with always lasts."

Mr. Schwab was elected president of the association, succeeding William L. Abbott of Chicago, and Elmer Ambrose Sperry was awarded the John Fritz gold medal, considered the highest award in the gift of the American engineering profession. It was disclosed that Mr. Sperry had invented an aerial torpedo designed to hit a target 100 miles distant, the use of which by the United States was prevented by the

armistice. Officers elected, besides Mr. Schwab, were: Vice-presidents, Charles L. Newcomb, Springfield, Mass.; Prof. Everett O. Eastwood, Seattle; Edward R. Fish, St. Louis; managers, Paul Doty, St. Paul; Ralph E. Flanders, Springfield, Vt., and C. N. Lauer, Philadelphia; treasurer, Erik Oberg, New York.

Following an address by President L. Howard Jenks, the Society of Refrigerating Engineers discussed mechanical refrigeration and household machines, some of the speakers being C. C. Spreen, L. A. Philipp, G. B. Bright and W. R. Hainsworth, while Mr. Ophuls discussed "Manufacturing Expense of Ice-Making Plants." "Management" was the general subject, under various sub-heads, discussed by the Taylor Society.

At a meeting of the oil and gas power division of the mechanical engineers, L. H. Morrison, Diesel-engine expert, predicted Diesel-driven automobiles, using crude oil as fuel and running 50 miles on one gallon of oil costing 5 cents, while H. C. Blake told of a new Diesel engine, which he said would run to 1200 revolutions a minute and makes possible the application of Diesel power to automobiles. The best Diesel speed heretofore is said to have been 300 revolutions a minute.

Besides the power exposition and the conventions, visiting engineers were given entertainment and information in a number of inspection trips, as through the Holland vehicular tunnel and to the new Diesel electric ferryboat of the Erie Railroad, a New York Edison station and a station of the United Electric Light and Power Company. Several college reunions also were held.

The display of power and mechanical equipment in the exposition was pronounced the most comprehensive and important of all such shows so far given, and the attendance was large, despite wretched weather on the first two or three days.

Great interest was displayed in the following facts about the South's developed power, displayed at the booth of the MANUFACTURERS RECORD.

Of the primary horsepower installed in manufacturing in the United States, the South has:

Character of power	Percentage in South
Steam engines .....	20
Water wheels and water motors .....	16
Internal combustion engines .....	17
Electric motors run on purchased current .....	18

Hydro-electric energy produced in the South now amounts to over 2,500,000 horsepower, or more than 22 per cent of the country's total water-power development.

In the information on the South's fuel and power resources were mentioned vast areas of lignite, oil and gas and water-power resources, which give it unmatched advantages for a great industrial development. The South has more than 100,000 square miles of coal lands, or over five times as much as Europe, excluding Russia, and is producing 38 per cent of the country's coal; also 5,000,000,000 barrels of oil reserves and is producing 56 per cent of the country's output, or 40 per cent of the world's petroleum supply. Last year the water-power development alone in the South increased more than 22 per cent, while the rest of the country made a gain of only 8 per cent.

Heating and ventilating apparatus formed an important section, more than 148 exhibits of all types of such equipment presenting novel developments that modern industry demands for its present program of increasing the productivity and economy of its factories. Under the leadership

of the American Society of Heating and Ventilating Engineers, substantial gains are said to have been made in new information that will simplify the problems of design and selection of heating and ventilating equipment. The president of the organization, W. H. Driscoll, and a past president, Homer Addams, were members of the advisory board for the power show.

A novel addition to the exhibits was a group of seven showings of woodworking machinery, the development of which is taking on a new engineering significance, under the leadership of the wood industries division of the American Society of Mechanical Engineers. The addition of this group of exhibits gave engineers engaged in the manufacture of wood products an opportunity not only to learn of the latest developments in their field, but also to become acquainted with developments in other branches of industry which may be successfully applied in their own field.

Of two exhibits of special importance, one showed the spectacular use that may be made of vertical sailing shafts for sails by which to propel sailing vessels. The Magnus effect, which was demonstrated practically by the rotor ship which visited New York in May, 1926, was explained by the use of models and by moving pictures. The second was a method of laying out piping of power plants by isometric drawings.

Among Southern exhibitors were the Frederick Iron and Steel Company, Frederick, Md., and the Midwest Piping and Supply Company of St. Louis. The Frederick company showed centrifugal pumps, including a multistage hydraulically balanced boiler-feed pump and a double-suction single-stage pump. It also had a small pump in operation, the casing equipped with glass windows so that the circulation of the liquid inside of the pump casing was visible. In addition, it exhibited a working model of the Frederick revolving roll separator, which is being used extensively for grading anthracite and bituminous coal, and it can also be used to advantage in grading limestone, etc.

The Midwest Piping and Supply Company displayed Midwest joints for superheated steam for pressures up to 900 pounds and temperatures up to 750 degrees Fahrenheit, these joints being of design which require neither gaskets nor field welding. An interesting feature showed a Midwest joint deflected 3 degrees and under a pressure of 2000 pounds to demonstrate that accurate alignment is not needed. Other features shown were a modification of the Midwest joint for high-pressure drip and drain lines; micro-photographs and the results of tests on the metal in Van Stone, Sargol and Midwest joint laps, as made by the company's process, and exceptionally short pipe bends to replace cast return bends.

Among the exhibitors were:

Air Preheater Corporation, New York; Aero Pulverizer Company, New York; Allis-Chalmers Manufacturing Company, Milwaukee; American Blower Company, Detroit; American Machinery and Foundry Company, Brooklyn, N. Y.; American Pulley Company, Philadelphia; American Schaeffer and Budenberg Corporation, Brooklyn, N. Y.; Anaconda Mining Company, New York city; Armstrong Cork and Insulation Company, Pittsburgh, Pa.; American Well Works, Aurora, Ill.; American Chain Company, Bridgeport, Conn.; American Brass Company, Waterbury, Conn.; Bartlett Hayward Company, Baltimore, Md.; Beaumont, R. H. Company, Philadelphia; Bethlehem Shipbuilding Corporation, Ltd., Bethlehem, Pa.; Boston Gear Works Sales Company, Norfolk Downs, Mass.; Botfield Refractories Company, Philadelphia; Bristol Company, The, Waterbury, Conn.; Brown Instrument Company, Philadelphia; A. M. Byers Company, Pittsburgh, Pa.; Borden Company, The, Warren, Ohio; Babcock and Wilcox Manufacturing Company, New York; Bethlehem Steel Company, Bethlehem, Pa.; Carborundum Company, Niagara Falls, N. Y.; Casey-Hedges Company, Chattanooga, Tenn.; Celite Products Company, Los Angeles, Cal.; Cochrane Corporation, Philadelphia; Coffin Valve Company, Boston, Mass.; Crane Company, Chicago, Ill.; Cooper-Hewitt Electric Company, Inc., Hoboken, N. J.; Cork Foundation Company, Inc., New York; Consolidation Coal Company, New York; Carrier Engineering Corporation, Newark, N. J.; Clarage Fan Company, Kalamazoo, Mich.; Cutter Electrical Manufacturing Company, Philadelphia; Combustion Engineering Corporation, New York; De Laval Separator Company, New York; De Laval Steam Turbine Company, Trenton, N. J.; Detroit Stoker Company, Detroit, Mich.; Joseph Dixon Crucible Company, Jersey City, N. J.; Dodge Manufacturing Corporation, Mishawaka, Ind.; Edge Moor Iron Company, Edge Moor, Del.; Elliott Company, Jeannette, Pa.; Erie City

Iron Works, Erie, Pa.; Everlasting Valve Company, Jersey City, N. J.; Fairbanks, Morse & Co., Chicago; Fisher Governor Company, Marshalltown, Iowa; Foundation Company, New York; Frederick Iron and Steel Company, Frederick, Md.; Fuller-Lehigh Company, Fullerton, Pa.; Fulton Company, Knoxville, Tenn.; Flynn & Emrich Company, Baltimore, Md.; Garlock Packing Company, Palmyra, N. Y.; General Electric Company, Schenectady, N. Y.; A. P. Green Fire Brick Company, Mexico, Mo.; Grisco-Russell Company, New York; Harding Company, Inc., New York; Hendrick Manufacturing Company, Carbondale, Pa.; Hyatt Roller Bearing Company, Newark, N. J.; Heine Boiler Company, St. Louis, Mo.; International Nickel Company, New York; Ingersoll-Rand Company, New York; Illinois Engineering Company, Chicago; Jenkins Bros., New York; Johns-Manville, Inc., New York; Jeffrey Manufacturing Company, Columbus, Ohio; Keystone Lubricating Company, Philadelphia; Lunkenheimer Company, Cincinnati, Ohio; Lincoln Electric Company, Cleveland, Ohio; Linde Air Products Company, New York; Manning, Maxwell & Moore, Inc., New York; Manistee Iron Works Company, Manistee, Mich.; Marlin-Rockwell Corporation, Jamestown, N. Y.; Midwest Piping and Supply Company, St. Louis, Mo.; Moore Steam Turbine Corporation, Wellsville, N. Y.; Morse Chain Company, Ithaca, N. Y.; Mueller Brass Company, Port Huron, Mich.; Master Woodworkers Manufacturing Company, Detroit, Mich.; Murphy Iron Works, Detroit, Mich.; McClave-Brooks Company, Scranton, Pa.; Nash Engineering Company, South Norwalk, Conn.; National Tube Company, Pittsburgh, Pa.; Niles Gear Company, New York; Norma-Hoffman Bearings Corporation, Stamford, Conn.; Norton Company, Worcester, Mass.; Oxweld Acetylene Company, New York; Otis Elevator Company, New York; Pennsylvania Crusher Company, Philadelphia; Pennsylvania Pump and Compressor Company, Easton, Pa.; Permutit Company, New York; Pittsburgh Piping and Equipment Company, Pittsburgh, Pa.; Pittsburgh Valve Foundry and Construction Company, Pittsburgh, Pa.; Pratt and Cady Company, Bridgeport, Conn.; Riley Stoker Corporation, Worcester, Mass.; Ruggles-Coles Engineering Company, New York; "S-C" Regulator Manufacturing Company, Fostoria, Ohio; S. K. F. Industries, Inc., New York; Schutte and Koerting Company, Philadelphia; Simplex Valve and Meter Company, Philadelphia; F. L. Smith & Co., New York; Springfield Boiler Company, Springfield, Ill.; B. F. Sturtevant Company, Boston, Mass.; Sherwood Manufacturing Company, Buffalo, N. Y.; Terry Steam Turbine Company, Hartford, Conn.; Timken Roller Bearing Company, Canton, Ohio; Topping Bros., New York; Texas Company, New York; Trilok Company, The, Pittsburgh, Pa.; Henry Vogt Machinery Company, Louisville, Ky.; Walsh and Weldner Boiler Company, Chattanooga, Tenn.; Walworth Company, Boston, Mass.; Westinghouse Electrical and Manufacturing Company, East Pittsburgh, Pa.; Weston Electrical Inst. Company, Newark, N. J.; Wheeler Condenser and Engineering Company, Carteret, N. J.; C. H. Wheeler Manufacturing Company, Philadelphia; T. B. Woods Sons Company, Chambersburg, Pa.; Worthington Pump and Machinery Company, New York; Watson-Stilman Company, New York; Yarnall-Waring Company, Philadelphia; Yale and Towne Manufacturing Company, Stamford, Conn.

### Tennessee Publishes Resource Survey.

Resources of east Tennessee have been studied and the facts presented in Bulletin No. 36, entitled "The Valley of East Tennessee; the Adjustment of Industry to Natural Environment," issued by the Tennessee Geological Survey, Nashville. This is said to be the first report of its kind; it is to be followed by another on middle Tennessee and possibly a third on the western part of the State. The report, by Earl C. Case, calls attention to the fact that "the area of east Tennessee, with its fertile soil, varied mineral resources, abundant hydro-electric power resources, both developed and undeveloped, and a climate well suited for manufacturing centers, is rapidly becoming an industrial region of importance. The future development of such an industrial region should not be left entirely to chance," states Mr. Case, "but conditions should be carefully studied and the natural wealth conserved by using it in the proper manner."

### Uses of Peat Lands Discussed in New Bulletin.

It is estimated that approximately 79,000,000 of the 113,537,000 acres of wet land in the United States are of potential economic importance, says the United States Department of Agriculture. The question whether the utilization of these peat lands is economically practicable is of interest in the States bordering the Great Lakes and those on the Gulf Coastal Plain.

For an economically sound solution of the problem, agriculture and other industry must have a fuller knowledge of the nature of the peat lands and must deal with them according to that knowledge. The Department has attempted to furnish some of the needed information in Bulletin 1419-D, Factors and Problems in the Selection of Peat Lands for Different Uses, copies of which may be obtained from the Department of Agriculture, Washington.



# New Comal Power Plant in Texas to Burn Pulverized Lignite for Fuel.

RECENTLY COMPLETED UNIT IN SUPERPOWER SYSTEM OF SOUTHWEST—THREE ADDITIONAL UNITS TO PROVIDE ULTIMATE CAPACITY OF 120,000 KILOWATTS.

By E. B. SEVERS, Engineer of Design, Electrical Department, the U. G. I. Contracting Company, Philadelphia, Pa.

Designed to burn pulverized lignite obtained from Texas mines nearby, and to operate with high thermal efficiency, justified by the nature of its load and an abundant supply of cold condenser cooling water under a natural head which makes an average vacuum of over 28½ inches practicable and circulating pumps unnecessary, the Comal power plant, recently completed at New Braunfels, Texas, near San Antonio, for the Comal Power Company, a subsidiary of the American Light and Traction Company, is a development of outstanding significance in the economy of superpower generation in the Southwest. The new station is well located for supplying large blocks of power to San Antonio, 31 miles away, and, through tie-line connections, to furnish power to the systems of the Texas Power and Light Company, the Texas Public Utilities Company, the Central Power and Light Company and the West Texas Utility Company. It will operate on a base load, for which service its natural advantages admirably fit it. The station is designed for an ultimate capacity of 120,000 kilowatts, the present installation of 30,000 kilowatts being the first of four units.

The contract for the design and construction of the plant was awarded to the U. G. I. Contracting Company April 18, 1925, and active work on the final plans and specifications was started May 9, 1925. The station was placed in operation on September 5, 1926.

Powdered-fuel equipment for burning lignite, air preheaters, fintube water-cooled side and rear walls, floor water screens and four stages of bleeder heaters for heating the feed water are among the plant's outstanding features. The boiler is designed for a steam pressure of 430 pounds per square-inch gauge to give 385 pounds per square-inch gauge and 700 degrees total temperature at the turbine throttle.

The site is probably the best inland location for a power plant in Texas. The large quantity of water required by a modern superpower plant is here found supplied by springs which deliver a minimum of 350 second-feet of clear water at a temperature of 75 degrees Fahrenheit throughout the year. With water at this low temperature continuously available, a vacuum of 28.4 inches can be carried at the exhaust of the turbine under full-load operation regardless of the temperature of the atmosphere, which in summer months may be above 100 degrees. The importance of this assured supply of cold spring water may be further judged from the fact that in one period of 10 months no rain fell

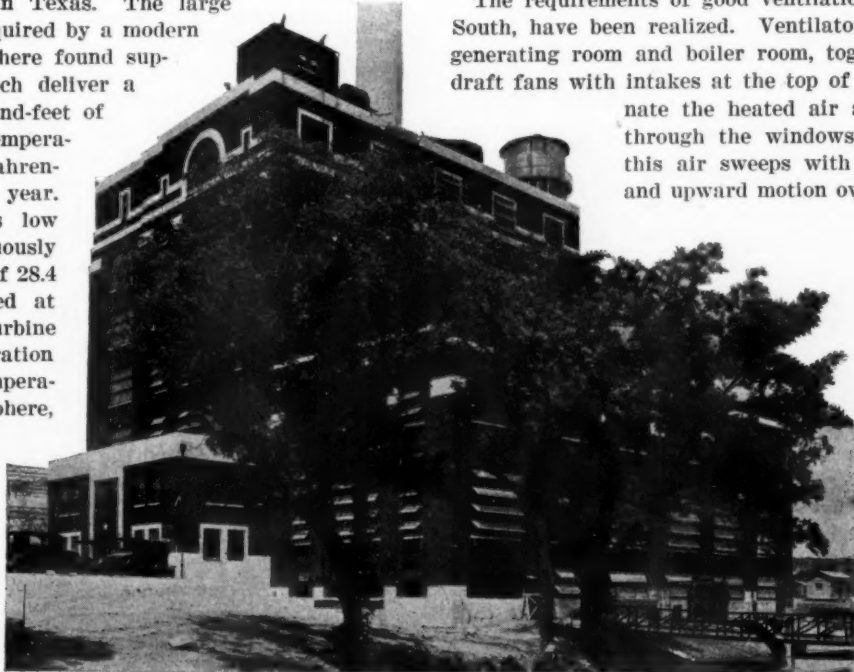
in or around the section in which the plant is located. The springs occur because of a fault in the rocks, and their waters have the same chemical composition and temperature as waters from artesian wells 500 feet deep in San Antonio. The springs feed a pond, which, in turn, feeds a private waterway formerly used as an intake channel for a small water turbine used to supply power to a flour mill and to the city of New Braunfels. The difference in level between this waterway and the lower Comal River into which it flows is 21 feet. By advantageously arranging the equipment using raw water, the engineers have made full use of this head for starting and maintaining a gravity flow of water through the condenser, the raw-water compartment of the intercondenser of the air ejector, the generator air cooler and the oil coolers. The elimination of circulating pumps has given the plant the permanent advantage of lower investment and operating charges against its auxiliary system than otherwise would have been the case. The quantity of spring water available is sufficient for a plant of 90,000 kilowatts capacity without recirculation. With recirculation the supply is ample for a station of 180,000 kilowatts capacity.

The fuels used in Texas power plants are principally oil and gas. So far lignite has not proven a satisfactory fuel when burned on stokers. Tests made at the Island Station of the St. Paul Gas Light Company, formerly a subsidiary of the American Light and Traction Company, however, proved that lignite from Texas mines can be burned satisfactorily when powdered, and that no unusual difficulties would be experienced in preparing or transporting this fuel. These tests established Texas lignite as a proved satisfactory fuel for power plants.

## General Design.

The requirements of good ventilation, so important in the South, have been realized. Ventilators on the roofs of the generating room and boiler room, together with the forced-draft fans with intakes at the top of the boiler room, eliminate the heated air and draw in fresh air through the windows in such manner that this air sweeps with a moderate crosswise and upward motion over the operating floors.

The boiler settings radiate little heat, being protected largely by water-cooled surface, and men in the boiler room are equally comfortable with those in the generating room. Windows in all outside walls provide an abundance of light. Gratings are used for floors wherever these facilitate ventilation or assure better lighting of remote places. Solid

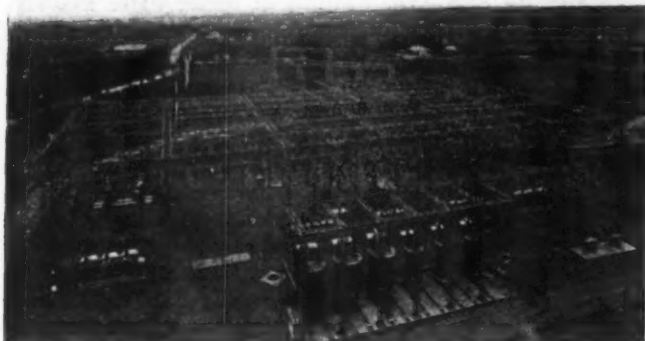


THE NEW COMAL POWER PLANT.

walls are used to isolate the pulverizing house from the boiler room and the boiler room from the generating room. Because of the topography of the site and the economies resulting from the use of gravity flow through the condenser, it was found advisable to have the level of the boiler room, as compared to that of the turbine room, somewhat higher than is usual in power plants. This has further facilitated lighting and ventilation by providing a greater exposed wall surface in the boiler room than otherwise would exist. The building is tapestry brick with concrete trim. Its volume, including office, machine shop and control room, is 60 cubic feet per kilowatt of installed generator capacity. For the ultimate station this ratio will be 46 cubic feet per kilowatt. The area of the present ground floor is .64 square foot per kilowatt; that of the ground floor of the ultimate station, as designed, will be .48 square foot per kilowatt."

The boilers and pulverizing mills have been placed parallel to the turbine axis, lengthwise of the building. The condenser is at right angles to the axis of the turbine. Circulating water flows through a revolving screen into the intake well, then by gravity through the intake tunnel beneath the turbine room basement floor and the two passes of the condenser into the discharge tunnel, which runs beneath the floor and intake channel a distance of 325 feet to the tail-race of the water wheel.

The generating room projects under the boiler room to



OUTDOOR SUBSTATION AND 132,000-VOLT AND 60,000-VOLT SWITCHING STATION.

form a bay in which are located the control for the motor-driven boiler-feed pumps, the steam-driven boiler-feed pump, two 150-kilowatt motor-generator sets, the evaporator and the evaporator heater. This equipment, together with the two motor-driven boiler-feed pumps in the turbine room, constitutes a group all elements of which are located on the operating floor within easy reach of the turbine-room operator. The 75-ton crane in the turbine room serves all parts of the room and, through light wells and iron plate-covered openings in the floor, all heavy equipment beneath it. Between the operating floor and the turbine-room basement floor is a mezzanine floor, and beneath this, built into the turbine foundation, is a platform supporting the steam-air ejectors. The oil coolers are on the mezzanine floor. The four feed-water heaters and the evaporator condenser are suspended vertically midway between the turbine-room operating floor and basement floor. At the south end of the generating room on the operating-floor level is the control room and above this the machine shop. Beneath the bay under the boiler room is a pipe gallery and a conduit rack, and beneath this, on the basement floor, is the 2300-volt station-service room. The 440-volt and 250-volt station-service switchboards and the storage batteries are located at the south end of the turbine-room basement. A surge tank, with a capacity of 17,000 gallons, is supported on the roof of the generating room. A combination passenger and freight ele-

vator is available at each floor in the plant, with a total of nine stops from basement to fan floor.

### Turbine Generator and Condenser.

The main generating unit is a 33,300 kva. Westinghouse turbine generator, designed for a throttle steam pressure of 385 pounds per square-inch gauge and a total steam temperature of 700 degrees Fahrenheit. It has a direct-connected exciter and four bleeder openings, all of which are used. The distribution of load between the various nozzles is such as investigation indicated would prove most economical for the actual daily load and bleeding demands. With a pressure of  $1\frac{1}{2}$  inches of mercury in the exhaust nozzle, the most economical straight condensing water rate is approximately 9.6 pounds per kilowatt-hour. This water rate, however, is not a true measure of the turbine's economy, and it is more of interest that the steam condensed in the main condenser is only 8.53 pounds per kilowatt-hour when the turbine is bled to heat its own feed at its most economical load. The generator is equipped with a closed ventilating system and a surface type air cooler for cooling the recirculated air.

The condenser is a 37,500-square-foot deaerating radial-flow two-pass Westinghouse surface condenser bolted rigidly to the turbine exhaust and supported on springs. When condensing 200,000 pounds steam per hour and using 44,000 gallons per minute of 75 degrees circulating water, it will produce a vacuum of 28.61 inches of mercury referred to a 30-inch barometer. The oxygen content of the condensate is guaranteed not to exceed .03 cc. per liter. The tubes are  $\frac{7}{8}$  inch in diameter and are made of No. 18 B. W. G. Muntz metal.

The two condensate pumps, each with sufficient capacity to handle the condensate produced under full load operation, are designed to force the condensate through the low-pressure part of the feed-water heating system to the suction side of the boiler-feed pump against a maximum head of 214 feet. The surge tank floats on the suction of the boiler-feed pump, thereby giving a constant head on the suction side of the pump. The condenser air ejector is a bank of two two-stage steam-jet air ejectors with inter and after condensers. The ejectors have a capacity of 37.7 cubic feet of free air per minute under a vacuum of  $28\frac{1}{2}$  inches and are guaranteed to consume not over 1300 pounds of steam an hour. This steam is condensed and its heat and condensate are recovered by the feed-water system. One compartment of the inter condenser uses raw water, the other and the two compartments of the after condenser use condensate.

The oil system, external to the turbine, consists of a centrifuge purifier, a storage tank of 1500 gallons capacity, a transfer pump and two oil coolers, one of which will be a spare. The coolers require 400 gallons per minute of cooling water, which will be obtained from the same intake channel as the circulating water for the main condenser. This water will flow through the coolers by gravity.

### Boiler Room and Fuel-Handling Equipment.

The boiler room contains two 1800 horsepower Babcock and Wilcox boilers, each equipped with 2300 square feet of fin-tube side and rear walls and water screens. Immediately above each boiler is its air preheater and following this are the induced-draft fan and the breeching, which runs through the boiler-house roof into a short stack, about 75 feet high, supported on the building. The forced-draft fans and the screw conveyors between the cyclone separators and the pulverized-fuel bins are on the same floor with the induced-draft fans, and this floor also supports the pulverized fuel bins. The air ducts run across the top of the boilers, down the boiler-room rear wall to beneath the burner floor and then across to the hollow walls at the fronts of the furnaces. The cyclone separators and the house-service water tanks



are on the roof of the boiler house. The ash hopper, on the ground floor, discharges into a steam-jet ash conveyor.

Each forced-draft and induced-draft fan is driven by two variable-speed motors of different sizes. The smaller motors operate when the load on the boilers is below 225 per cent of their rating. When the load is greater than this the larger motors carry the fan loads. The boiler-feed pumps consist of two 750-gallon-per-minute motor-driven variable-speed units and one steam turbine-driven 750-gallon-per-minute unit. The steam-driven unit is provided with a Foster governor so set that when the differential pressure between the boiler-feed water main and the steam drum drops below a predetermined amount the steam-driven pump will automatically be brought into service. The forced-draft fans, primary-air fans, induced-draft fans, motor-driven boiler-feed pumps, fuel feeders and the boiler dampers are under Smoot automatic control. The speed of the motor-driven boiler-feed pumps is controlled to maintain a constant differential between the steam-header pressure and the pressure in the feed-water line.

Being designed primarily to burn Texas lignite, a fuel which is more flocculent than coal when pulverized and which contains a large amount of moisture even after drying, the boilers and furnaces contain certain modifications which are of interest. The slag screens have been extended to comprise the first three rows of boiler tubes, the third, as well as the second, rows of tubes used with standard spacings having been omitted to accomplish this. Also, the burner arches have been depressed below the boiler water legs farther than usual, so that the refractory walls above it are probably more than twice as high as those customarily used in pulverized coal-burning furnaces. This has been considered advisable as a precaution against incomplete combustion that might otherwise occur at certain loads should the flocculency of the lignite give it a tendency to short-circuit the lower part of the combustion chamber. To accelerate combustion the primary air is preheated by being passed through Detrick hollow walls, which are used in the ash hopper and also over the Detrick arch through which the burners project. The cooling effect of this air on these walls also reduces the cost of their maintenance. Secondary air for combustion is preheated, first by the plate-type air preheaters, then by hollow side walls through which it passes before entering the furnaces through the front walls. Each air preheater has 26,568 square feet of effective surface and capacity for raising 85 per cent of the air required for combustion from an initial temperature of 100 degrees Fahrenheit to an outlet temperature of 495 degrees Fahrenheit when the boilers operate at 300 per cent of their rated capacity. The hollow side and front walls of the furnaces and the arches are of Detrick construction.

The raw fuel, after passing over track scales, is delivered by rail to the track hopper. It is then fed to the crushers and crushed until all of it passes through a  $\frac{3}{4}$ -inch mesh screen. The crushed fuel is carried by the skip hoist to the top floor of the preparation house and there distributed to the raw-fuel bins by means of belt conveyors. From the raw-fuel bins the fuel, which at this point contains 30 per

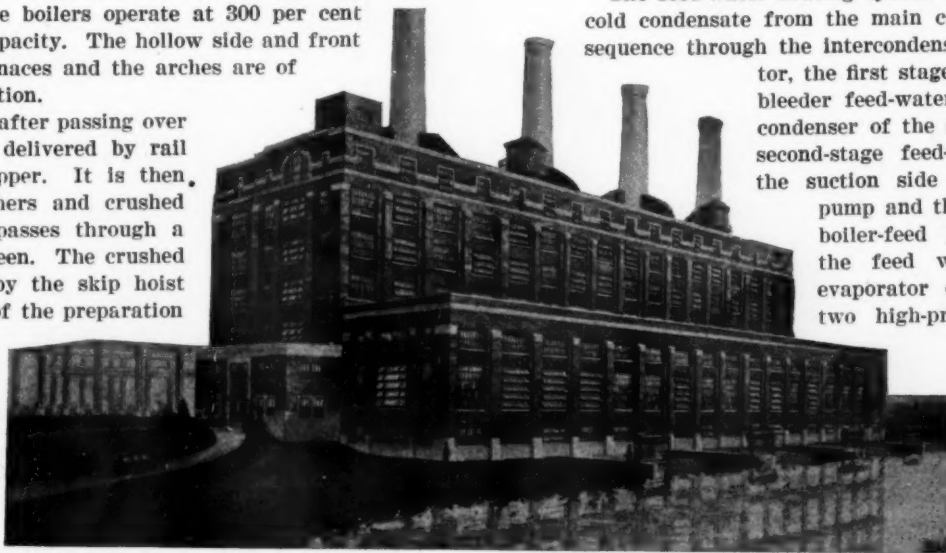
cent moisture, travels downward by gravity through the dryers, consisting of three banks of four units, to the pulverizing mills. The mill exhausters deliver the pulverized fuel to the cyclone separators, from which a system of duplicate screw conveyors distributes it to each of the two pulverized fuel bins in front of the boilers, where a 24-hour supply of pulverized fuel can be kept. Primary air at 250 degrees Fahrenheit is introduced into the feeders located directly beneath the bins, and this air transports the fuel to the burners located at the level of the operating floor. Each boiler has 12 burners. The feeders have been arranged in two banks of six feeders each, which deliver the fuel to alternate burners. With this arrangement, if one group of six feeders is cut out of service the remaining group will distribute the fuel evenly across the width of the furnace.

The house-service water system serving the entire plant has two constant-speed motor-driven centrifugal pumps for regular service, and one steam turbine-driven centrifugal pump for emergency purposes. Each pump has a capacity of 1000 gallons per minute against a total head of 175 feet. The house-service tank on the boiler-house roof has a capacity of 30,000 gallons. A complete fire-fighting system for the protection of the plant and a complete compressed-air system for the usual requirements of a power house of this character have been provided.

#### Feed-Water Heating System.

Four stages of feed-water heaters designed for low-terminal temperature difference between the steam and the feed water—5 degrees at full load and approximately 3 degrees at the most economical load—the interposition of the after-condenser of the air ejector in the feed-water heating system between the first and second stage bleeder heaters, the use of bled steam for the evaporators and of a separate evaporator-condenser heater, and the separation of the heater draining system into distinct high-pressure and low-pressure systems, so designed that drains are independently returned to the feed water with the minimum depreciation of temperature head practicable, are the principal points of interest in the plant's feed-water system. Careful investigation proved the various elements constituting the system to be those most satisfactory for economy and convenience in operation. The fourth-stage feed-water heater and the low-terminal temperature differences were amply justified by the indicated resulting economies. The evaporators provide all the distilled water required by the plant and, considering initial cost and economy of operation, their location proved most favorable.

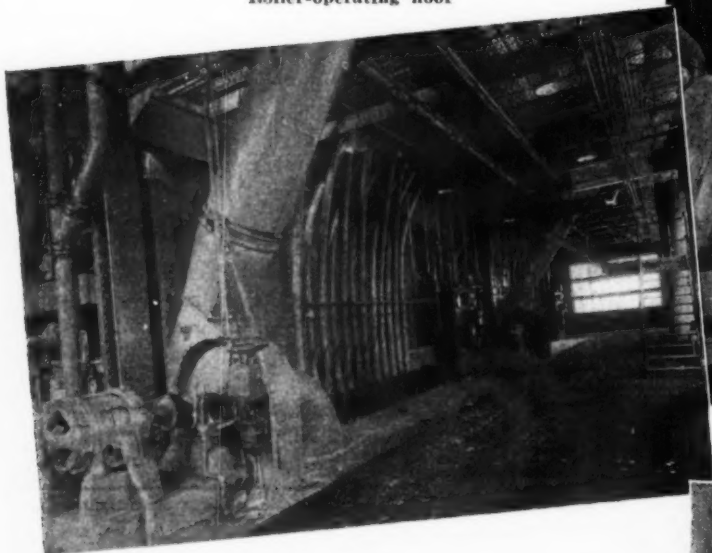
The feed-water heating system is as follows: The cold condensate from the main condenser travels in sequence through the intercondenser of the air ejector, the first stage or lowest-pressure bleeder feed-water heater, the after-condenser of the air ejector and the second-stage feed-water heater into the suction side of the boiler-feed pump and the surge tank. The boiler-feed pump then forces the feed water through the evaporator condenser and the two high-pressure heaters to the boilers. The evaporators and the fuel dryers take steam from the No. 2 bleed point, where the maximum pressure is 85 pounds



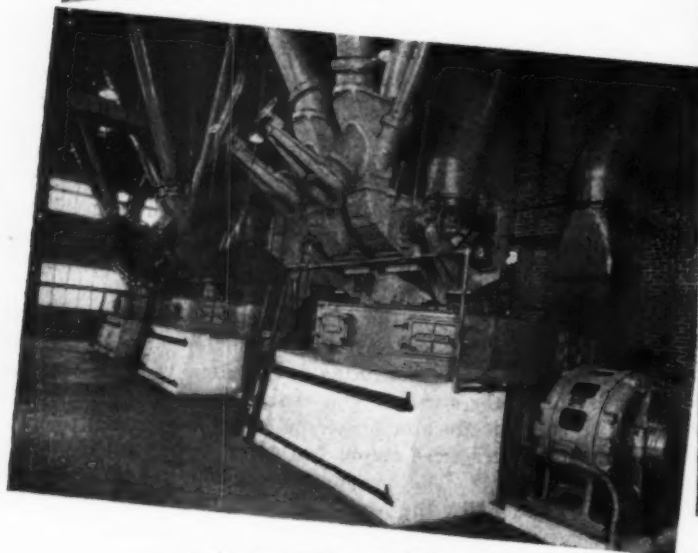
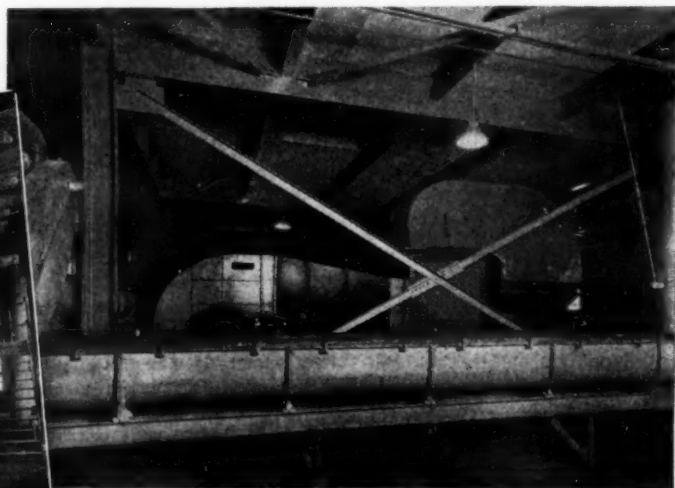
THE PLANT AS IT WILL APPEAR WHEN ALL FOUR UNITS ARE COMPLETED.

## Some Interior Views of the New Power Plant Showing

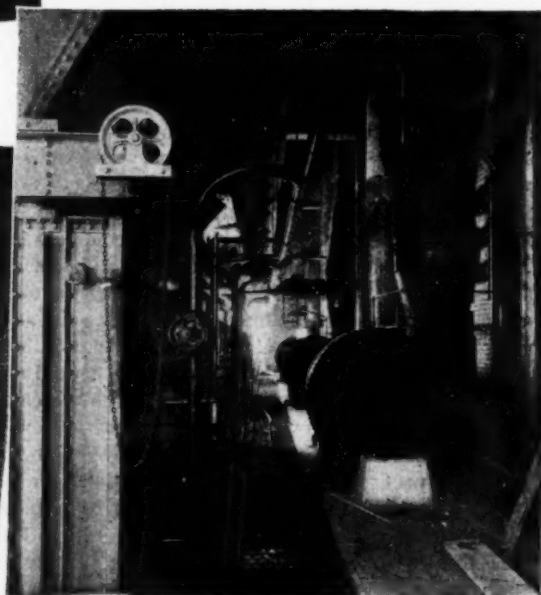
Roller-operating floor



Top floor of boiler house



Pulverizer mills and duct system



Raw-coal bunker and connection to steam dryers



Plant machine shop, with station crane for heavy work



Continuation of steam dryers with exhaust duct system

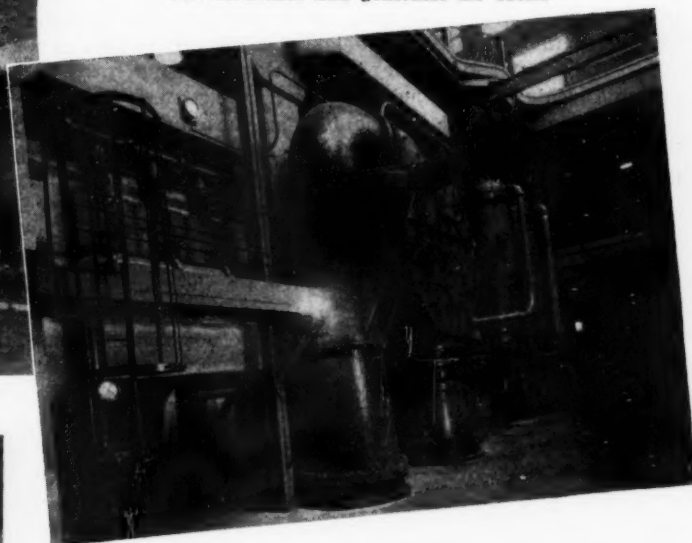


## Design and Layout of Principal Mechanical Equipment.

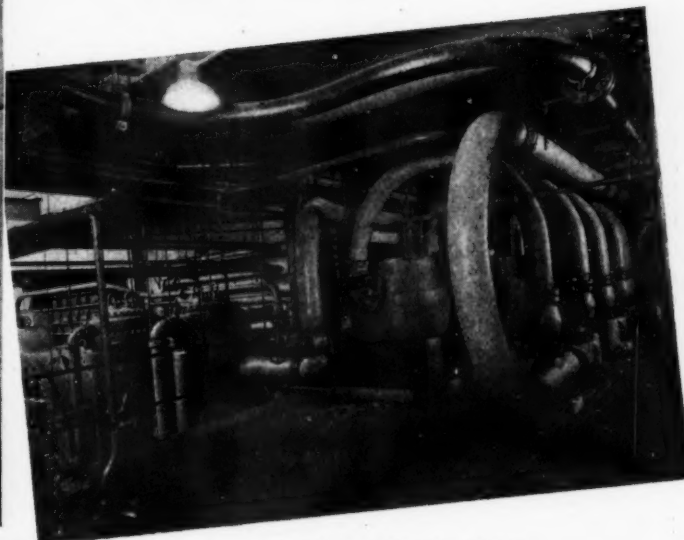


General view of first unit

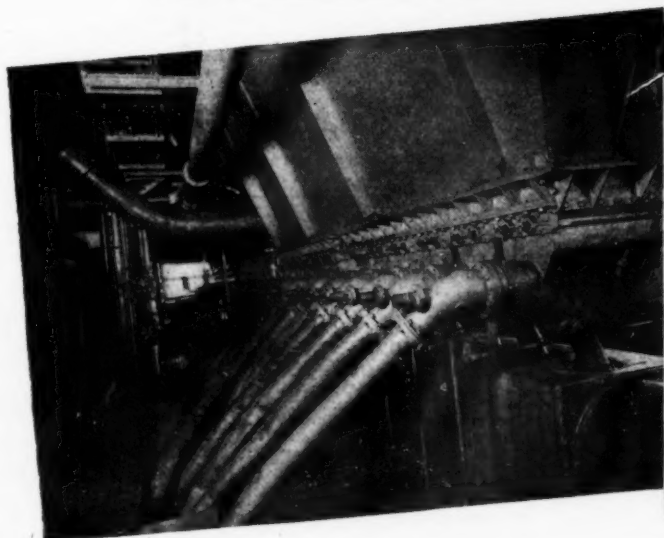
The condenser and generator air cooler



The  
condenser  
and  
condensate  
pumps



Heaters and heater piping



Bottom of pulverized fuel storage bins



Boiler-operating floor

per square inch absolute. Provision has been made for increasing the capacity of the evaporator by by-passing its vapors to No. 2 heater, thus increasing the available temperature head, should this prove advisable in emergencies or when the turbine operates at light loads. The after-condenser of the air ejector was placed in the heating system after the first stage of heating in the interest of economy. The surge tank has a steam blanket under 10 pounds per square inch gauge pressure and is elevated sufficiently to prevent flashing at the boiler-feed pump suction.

No. 2 heater, which is the high-pressure heater of the low-pressure system, drains into No. 1 heater, and the condensate from this latter heater is pumped by a small pump forward into the feed-water system. Drains from the inter and after condensers are discharged directly into the main condenser; those from the inter-condenser through a loop, those from the after-condenser through a trap. The highest-pressure heater is drained into the next lower-pressure heater, which drains into the evaporator condenser. A pump removes the condensate from the evaporator condenser and delivers it to the suction side of the boiler-feed pumps. This separation of the high-pressure and low-pressure heater draining systems relieves the low-pressure system of the burden of handling condensate from the high-pressure heaters and otherwise justifies itself by the resulting improvement in fuel economy. All heaters have been provided with by-passes, so that any heater may be taken out of service without disturbing the rest of the system. Each trap also is provided with a by-pass. If the evaporator condenser is out of service, the drains from the two high-pressure heaters are by-passed through a trap directly to the main condenser. The same disposal is made of condensate from the evaporator condenser when the high-pressure heater condensate pump is out of service. Emergency by-passes to the main condenser have also been provided for each of the two low-pressure heaters. Condensate from the fuel dryers is pumped into the surge tank, while drips from the high-pressure steam lines are delivered either to the fourth or third stage bleeder heaters. Should both of these heaters be out of service, the high-pressure drips will be discharged directly into the boiler blow-off system.

### Electrical Apparatus.

As most of the power generated will be transmitted in large blocks directly to San Antonio or over the tie connections with the Texas Power and Light Company, the usual indoor generator bus, with the necessary building for cell structure and switches, were omitted. The generators, therefore, are connected by underground cables directly to outdoor transformers. These transformers feed the main buses, which are in duplicate, with duplicate oil circuit-breakers. Operation will be at 76,200 volts until load conditions make it necessary to increase to 132,000 volts.

The lines to San Antonio will be taken off the main bus and a bank of transformers will feed duplicate 60,000-volt buses, similar in design to the main 132,000-volt bus. The 60,000-volt bus is necessary for the Texas Power and Light Company supply and for the load at Seguin, McQueeney and Boerne.

Transformers stepping down to 2300 volts from the main bus furnish the station auxiliary service. This 2300-volt structure is indoors in a room running lengthwise of the building and is built of pipe frame with duplicate buses. Single circuit-breakers are used, as the auxiliaries are duplicates or have spares. All motors over 50 horsepower are connected to this supply and are suitable for full-voltage starting, eliminating the low-voltage starting bus or compensators. Variable-speed motors have been supplied with drum-type controllers.

As the full stream flow will not be used for condensing

purposes at this time, water is available for the 600-kilowatt water-wheel formerly used to supply local power. This machine will be connected to the station auxiliary bus, making use of the output as a supply and also as emergency power up to the capacity of the water-wheel. Later this water-wheel will be replaced by an emergency house turbine.

A small bank of 2300-440-volt transformers is used to supply motors under 50 horsepower, which are also started with full-line voltage, with few exceptions.

Two 250-volt D. C. motor-generators are used as spare exciters and these also furnish power for some D. C. motors which require close speed regulation, such as fuel feeders.

Duplicate 250-volt storage batteries with their charging sets are used for all control of oil circuit-breakers, the spare battery standing connected to emergency lighting through an automatic throw-over switch. The batteries are interchangeable to insure reliable control service.

The main control switchboard on the operating floor level consists of a combination control desk and meter board, with a relay and recording instrument board in the rear. The board is symmetrical about a center panel. The end panels are set at 45 degrees to permit ease of operation.

The room below the control board is used as a conduit terminal room, both for main control and for 440 and 250 volt station conduits, the latter coming from a switchboard on the basement elevation below the conduit room.

All conduits from the terminal room are run in an open rack on a pipe gallery which is located beneath the boiler house lengthwise of the building. Access to the conduits is always possible and permits changes or additions without difficulty.

A 30,000 kva. receiving substation has been built in San Antonio, following the design of the Comal outdoor structure. This station steps down from 132,000-76,000 to 13,800 volts and feeds into the ring system now established in San Antonio.

## PRINCIPAL DETAILS COMAL POWER PLANT.

### GENERAL.

Location .....	New Braunfels, Texas.
Capacity, present.....	30,000 kw.
Capacity, ultimate.....	120,000 kw.
Type of construction.....	Steel, frame, brick, concrete trim.
Building foundations.....	Concrete on bedrock.
Floors .....	Tile, conc. and grating.
Engineers and constructors.....	The U. G. I. Cont. Co.

### FUEL.

Kind of fuel.....	Texas lignite.
Percentage of ash.....	7.77.
Per cent moisture.....	30.18.
Per cent sulphur.....	1.07.
B. T. U. per lb.....	7653.

### CIRCULATING WATER.

Source .....	Springs feeding Comal River.
Average yearly temperature.....	75 deg. Fahr.
Solids in solution and suspension, grains per gal. ....	17.3.
Variation in water level at entrance to intake tunnel .....	9 ft.

### MAKE-UP WATER.

Source .....	Springs feeding Comal River.
Average yearly temperature.....	75 deg. Fahr.
Solids in solution and suspension, grains per gal. ....	17.3.
Alkalinity (expressed in parts CaCO <sub>3</sub> per million) .....	226.

### IMPORTANT DIMENSIONS.

Present turbine room operating floor.....	75 ft. x 107 ft.
Ultimate turbine room operating floor.....	75 ft. x 383 ft.
Control room ground floor.....	28 ft. x 57 ft.
Present boiler room screen floor.....	58 ft. x 113 ft.
Ultimate boiler room screen floor.....	58 ft. x 383 ft.
Width of burner floor from building wall to boiler front.....	23 ft.
Present pulverizer house and coal tower ground floor.....	30 ft. x 112 ft.
Ultimate pulverizer house and coal tower ground floor.....	30 ft. x 383 ft.
Office building, toilet and locker room ground floor .....	59 ft. x 24 ft.
Basement floor to turbine room floor.....	30 ft.
Basement floor to mezzanine floor.....	17 ft.
Turbine room operating floor to crane rail.....	35 ft.



Turbine room operating floor to bottom of roof truss.....44 ft. 6 in.  
Boiler room ground floor to roof truss.....110 ft. 9 in.

## IMPORTANT RATIOS.

Present volume of building to installed kw.....60 cu. ft./kw.  
Ultimate volume to ultimate kw.....46 cu. ft./kw.  
Present area of ground floor to installed kw.....6356 sq. ft./kw.  
Ultimate area to ultimate kw.....475 sq. ft./kw.  
Boiler heating surface, not including water screens to installed kw.....1210 sq. ft./kw.  
Boiler surface, including water screens to installed kw.....1365 sq. ft./kw.  
Furnace volume to boiler surface, not including water screens.....92 cu. ft./sq. ft.  
Furnace volume to boiler surface, including water screens.....818 cu. ft./sq. ft.  
Condensing surface to installed kw.....1.25 sq. ft./kw.  
Circulating water to installed kw.....1.47 g.p.m./kw.  
Installed turbine capacity to volume of furnace.....89 kw./cu. ft.  
Installed turbine capacity to boiler feed pump capacity.....13.3 kw./g.p.m.  
Installed turbine capacity to forced draft air-handling capacity.....205 kw./cu. ft. per m.  
Installed turbine capacity to induced draft-fan capacity.....150 kw./cu. ft. per m.

## BOILERS AND SUPERHEATERS.

Manufacturer.....Babcock & Wilcox Co.  
Type of boiler.....B. & W. cross drum.  
Number installed.....2.  
Heating surface per boiler.....18182.  
Furnace volume (each).....16750.  
Dimensions of drums.....54-in. diam. x 30 ft. 3 1/4 in. long.  
Tube diameter.....4 in.  
Heating surface in side walls, rear wall and floor screens per boiler.....2,300 sq. ft.  
Total heating surface in boiler.....20,482 sq. ft.  
Boiler pressure.....430 lb. per sq. in.  
Total steam pressure.....700 deg. Fah.  
Type of superheater.....B. & W. convection.  
Location of superheater.....Interdeck.  
Superheater surface per boiler.....3,708 sq. ft.  
Average height of combustion chamber.....34 ft.  
Number tubes wide.....38.  
Number tubes high.....18.  
Screen floor to center line of mud drum.....34 ft.  
Screen floor to center line steam drum.....60 ft. 6 in.  
Face front wall to face rear wall.....25 ft. 6 in.  
Type of setting.....Detrick air-cooled hollow-front wall. Combustion Eng. Co., fine-tube side and rear walls, steel encased.

## AIR PREHEATERS.

Manufacturer.....Combustion Eng. Corp.  
Type.....Lopulco, plate type.  
No. of heaters.....2.  
Location.....Above uptake.  
Heating surface of air preheater.....26,568 sq. ft. each.  
Preheater heating surface per sq. ft. boiler heating surface (including water screens).....1.29.  
Dimensions of preheater elements.....4 ft. 6 in. x 20 ft. 0 in.  
Gauge of metal in preheater elements.....No. 12 B. W. G.  
Spacing of elements.....1/2 in. on air side and 1/2 in. on gas side.  
Number of elements.....164.

## CHIMNEY.

Type.....Concrete.  
Built by.....J. A. Rossiter, Inc.  
Number.....1.  
Number of boilers served by stack.....2.  
Inside diameter at top.....12 ft.  
Inside diameter at base.....13 ft. 8 in.  
Height of top above floor screen.....167 ft.  
Support.....Mounted on bldg. steel.

## FORCED-DRAFT FANS.

Manufacturer.....Sturtevant.  
Type.....Turbothane.  
Drive on each fan.....One 125 h. p. and one 30 h. p. open-type motor.  
Number per boiler.....4.  
Capacity.....73,000 c. f. m.  
Static pressure.....6 in.  
Speed.....1150 r. p. m.  
Air-supply control.....Smooth control on variable speed motors.

## INDUCED-DRAFT FANS.

Manufacturer.....Sturtevant.  
Type.....Multivane, double inlet.  
Drive on each fan.....One 250 h. p. and one 75 h. p. open-type Westinghouse motor.  
Number per boiler.....4.  
Capacity of each.....100,000 c. f. m. at 320 deg. Fahr.  
Static pressure.....7.2 in.  
Speed.....865 r. p. m.  
Control.....Smooth control on damper and fan speed.

## RAW-FUEL HANDLING EQUIPMENT.

Track scales.....Howe.  
Unloading pit.....U. G. I. Contracting Co.  
Raw fuel bunker capacity.....470 tons.  
Locomotive crane.....Ohio Loco. Crane Co.  
Locomotive.....Baldwin Locomotive Co.

## RAW-FUEL HANDLING EQUIPMENT.

Manufacturer.....Link-Belt Co.  
Track beams.....  
Apron feeder.....36 in. wide by 57 ft. centers.  
Coal crushers.....  
Drive for apron feeder and crushers.....One 75 h. p. Westinghouse motor.  
Skip loader.....  
Skip hoist and drive.....  
Magnetic separator belt.....  
Distributing belt conveyor.....  
Drive for belt conveyors.....One 20 h. p. Westinghouse motor.  
Capacity of coal-handling equipment.....120 tons/hour.

## PULVERIZED-FUEL EQUIPMENT.

Make.....Combustion Eng. Co.  
Type.....Lopulco.  
Feeders:  
Number.....12 per boiler, 2 groups of 6.  
Type.....Multiple.  
Size.....5 1/2 in.  
Drive.....Chains and sprockets.  
Four 10 h. p., 400 to 1200 r. p. m., D. C. Westinghouse motors.

## BURNERS.

Number.....12 per boiler.  
Type.....Right-angle fantail nozzle.  
Size.....5 in.

## FEEDER BLOWERS.

Number.....1 per boiler.  
Manufacturer.....Sturtevant.  
Capacity.....12,000 c. f. m. at 200 deg. Fahr. 20 in. S. P., 1750 r. p. m.  
Drive per fan.....One 100 h. p., 1760 r. p. m., C. S. Westinghouse motor.

## CONVEYORS.

Number.....2 systems of 3 conveyors each.  
Size.....16 in.  
Total length each system.....125 ft.  
Total capacity each system.....54.6 tons/hr.  
Drive.....Six 15 h. p., 860 r. p. m., C. S. Westinghouse motors.

## PULVERIZERS.

Number.....3.  
Type and capacity.....Raymond 6-roll (15 ton).  
Drive.....Three 200 h. p., 435 r. p. m., C. S. Westinghouse motors.

## DRYERS.

Number.....12, 3 groups of 4 each.  
Type.....Bled steam.  
Size.....1485 sq. ft. each, 45 grids per dryer.

## DRYER EXHAUSTER.

Number.....3.  
Maker.....Sturtevant.  
Capacity.....20,000 c. f. m. at 140 deg., 7 in. S. P., 575 r. p. m.  
Drive.....Three 100 h. p., 580-1160 r. p. m. Westinghouse C. W. motors.

## CYCLONE COLLECTORS.

Number.....3 for dryer exhausters and 3 for pulverizer exhausters.

## PULVERIZED COAL BUNKER CAPACITY.

Capacity.....470 tons.

## ASH-HANDLING EQUIPMENT.

Manufacturer.....Frederick Engr. Co.  
Type.....Steam jet.

## EXTRACTION HEATERS.

Make.....Westinghouse Elec. & Mfg. Co.  
Type and number.....4 floating head, closed type.  
Heater Number.....1 2 3 4  
Heating surface sq. ft.....1200 1200 1200 1200  
Passes.....4 4 4 4  
Material in tubes.....Adm'lty Adm'lty Adm'lty Adm'lty  
Metal Metal Metal Metal  
Water per hour.....254,000 289,400 333,450 333,450  
Temperature entering deg. Fahr. 96 161 238 309  
Temperature leaving.....161 226 309 368  
Steam bled lb./hr.....15,850 19,550 24,200 19,850  
Absolute pressure lb./sq. in.....5.51 21.7 84.9 183

## TURBINE GENERATORS.

Make and number.....1 Westinghouse.  
Capacity.....30,000 kw., 90% p. f.  
Speed.....1800 r. p. m.  
Generator characteristics.....3 phase, 60 cycle, 13,800 v.  
Exciter.....Direct connected, 120 kw., 250 v.

Steam pressure at throttle.....	385 lb. per sq. in. gage.
Superheat at throttle.....	255 deg. Fahr.
Vacuum.....	28½ in.
Auxiliary oil pump.....	Steam turbine driven.
Oil coolers.....	2, one a spare.
Water rate at 19,800 kw. (no bleeding).....	9.65 lb. per kw.
Oil-purifying system.....	De Laval.

## CONDENSER AND AUXILIARIES.

Manufacturer.....	Westinghouse.
Number and type.....	One 2-pass radial flow.
Tube surface.....	37,500 sq. ft.
Tube diameter, in.....	¾ in. O. D.
Material in tubes.....	No. 18 B. W. G. Muntz.
Connection to turbine.....	Rigid.
Supports.....	Springs.
Condensate Pumps.....	Westinghouse, 2-stage.
Number.....	2.
Capacity.....	770 g. p. m. each.
Total head.....	214 ft.
Driven by.....	Two 90 h. p. induction motors.

Air-removal equipment.....	Westinghouse steam jet.
Number.....	1 bank of 2 ejectors.
Capacity.....	37.7 cu. ft. per min. at 28½ in. vac.

## GENERATOR AIR COOLERS.

Maker.....	Griscom-Russell Co.
Type.....	Closed surface.
Temperature inlet water, deg. Fahr.....	80.
Cooling water, g.p.m.....	1100.

## EVAPORATORS.

Maker.....	Wheeler C. & E. Co.
Type and number.....	1 unit of 2-coil type evap. contraflow.
Capacity, lbs. per hour.....	8000.
Steam pressure, lb. per sq. in.....	56.1.
Steam per hour, lbs.....	9230.
Evaporator Condenser.....	
Type.....	Wheeler surface.
Number passes.....	2.
Surface, sq. in.....	1060.
Tube diam., in.....	¾ in.
Metal in tubes.....	Admiralty.
Circulating water, lbs. per hour.....	236,000.
Temperature inlet water deg. Fahr.....	215.
Evaporator feed-water heater.....	Cochrane (open type).
Capacity of feed-water heater.....	400 h. p.

## AIR COMPRESSOR.

Maker.....	Ingersoll-Rand Co.
Capacity.....	136 c. f. m.
Drive.....	30 h. p., 1160 r. p. m., open type C. S. Westinghouse motor.

## TURBINE ROOM CRANE.

Type.....	4-motor.
Maker.....	Northern Engr. Co.
Capacity.....	Main hoist, 75 tons.
	Auxiliary hoist, 15 tons.
Span.....	53 ft. 6 in.

## TRAVELING WATER SCREENS.

Maker.....	Link-Belt Co.
Number.....	1.

## TANKS.

House storage tanks.....	30,000 gal. Chl. Bridge & Iron Works.
Surge tank.....	17,000 gal. Downingtown Iron Works.

## BOILER-FEED PUMPS.

Maker.....	De Laval.
Number and type.....	Three 6-stage.
Speed r.p.m.....	Two 1750.
	One 2200.
Drive.....	Two 350 h. p. Westinghouse open-type motors and one 400 h. p. De Laval turbine.
Feed pump control.....	Smoot.
Capacity.....	750 g. p. m. each, 1200-ft. head.

## MISCELLANEOUS PUMPS.

## Fire Pump.

Maker.....	Goulds Mfg. Co.
Type and number.....	One single-stage double suction.
Capacity.....	1000 g. p. m.
Total head.....	231 ft.
Speed.....	1760 r. p. m.
Drive.....	100 h. p. Westinghouse motor.

## Condensate Pumps for Feed-Heating System.

Maker.....	A. S. Cameron.
Capacity and head.....	One 130 g. p. m., 35-ft. head.
	One 65 g. p. m., 126-ft. head.
Number.....	2.
Speed.....	1750 r. p. m.
Drive.....	Westinghouse motors.

## Evaporator Feed Pump.

Maker.....	Goulds Mfg. Co.
Capacity and head.....	30 g. p. m., 150-ft. head.
Drive.....	Westinghouse motor.

## Dryer Condensate Pump.

Maker.....	Nash Engineering Co.
Capacity and head.....	150 g. p. m., 92-ft. head.
Drive.....	G. E. motor.

## Air Washer Pump.

Maker.....	A. S. Cameron.
Capacity and head.....	100 g. p. m., 100-ft. hd.
Drive.....	G. E. motors.

## House Service Pump.

Maker.....	Goulds Mfg. Co.
Number and type.....	3 single-stage, double suction.
Size.....	1000 g. p. m., 175-ft. head.
Drive.....	Two 75 h. p. Westinghouse 1760 r. p. m. a. c. motors.
	1 De Laval turbine.

## Sump Pump.

Maker.....	Goulds Mfg. Co.
Number and type.....	1 single-stage, double suction.
Size.....	300 g. p. m., 52-ft. hd.
Drive.....	1160 r. p. m. Westinghouse motor, 7½ h.p.

## PIPING VALVES AND COVERING.

High-pressure piping.....	M. W. Kellogg.
Miscellaneous piping and fittings.....	National Valve Co.
	Midwest Piping & Supply Co.
High-pressure and low-pressure valves.....	Lunkenheimer.
Stop-check valves.....	Schutte-Koerting.
Steel castings and main steam manifold.....	Penn Steel Casting Co.
High-pressure small fittings.....	Henry Vogt Co.
Circulating water piping.....	W. K. Mitchell Co.
Pipe joints.....	Kellogg special small tongue and groove.
Pipe and duct covering.....	Phillip Carey Co. and Fred Sprinkman Sons.
Motor-operated equipment for gate valves.....	Chapman.
Gate valves for circulating water line.....	Chapman.
Atmospheric relief valves.....	Atwood & Merrill Co.
Soot blowers.....	Diamond.
Feed-water regulators.....	Two 4-in. copes per boiler.
Safety valves.....	Consolidated.
Blow-off valves.....	Edwards.
Steam traps and drainers.....	Atwood & Morrill Co.
	Cochrane Co. and Armstrong Co.
Water columns.....	Babcock & Wilcox Co.

## SERVICE ELEVATOR.

Maker.....	Otis Elevator Co.
Type (passenger and freight).....	Push-button control.
Capacity.....	12,000 lbs.
Speed.....	90 ft. per min.

## INDICATING AND RECORDING INSTRUMENTS.

Indicating thermometers.....	Foxboro Co.
Poller meters, air flow, steam flow.....	Bailey Meter Co.
Steam-flow meter, electric.....	G. E. Co.
Water meters, Venturi.....	Simplex Valve & Meter Co.
Indicating steam-pressure gauges.....	Schade Valve Mfg. Co. and Crosby Co.
Recording pressure gauges.....	Brown Instrument Co.
Recording thermometers.....	Brown Instrument Co.
Draft gauges, multipointer.....	Bailey Meter Co.
Barometer vacuum recorder.....	Uehling Inst. Corp.
CO <sub>2</sub> indicators and recorders.....	Smoot Engineering Co.

## ELECTRICAL EQUIPMENT.

Transformers.....	G. E. Co.
Oil circuit breakers.....	G. E. Co.
Switchboard.....	Westinghouse.
Instruments and relays.....	Westinghouse.
Motors.....	Westinghouse.
M-G set.....	Westinghouse.
Indoor disconnecting switches and bus supports.....	Elec. Dev. & Mach Co.
Outdoor disconnecting switches and bus supports.....	Elec. Power Equip. Co. and Locke Insulator Co.
Air type circuit breakers.....	Westinghouse.
Storage batteries.....	Standard Elec. Co., San Antonio.
Outdoor steel structures.....	R. D. Coombs.
Metering transformers.....	Westinghouse and Niagara Elec. Imp. Co.
Lightning arresters.....	Westinghouse.
Cable.....	Standard underground.

## Increasing Tourist Travel to Southeast.

Charleston, S. C., December 10—[Special.]—Although the annual tourist pilgrimage to the Southeast is just getting under way, automobiles from nearly every State in the Union already have crossed the new steel and asphalt viaduct over which visitors from Northern points ride en route to Charleston. The many historic relics and landmarks of this section are now readily accessible to the motorist because of new highways and bridges. The Old Charleston remains, yet the New Charleston provides up-to-date hotels and other modern facilities.



# Development of the Non-Metallic Industries of the South.\*

By A. F. GREAVES-WALKER, Professor and Head, Department of Ceramic Engineering, North Carolina State College, Raleigh.

In attempting to cover this broad but interesting subject in a brief address, one must instill into his hearers, if possible, some of the spirit that penetrates the New South, lest he be considered boastful and overenthusiastic. There is something almost pathetic at times in the eagerness of the Southerner to grasp new ideas and to learn of the value of his own resources. It is difficult for him, as well as others, to realize that resources of such tremendous value should have been hidden for so long a time, yet one has only to realize that the poverty and isolation caused by the Civil War and its aftermath precluded any possibility of their investigation and development during the last generation.

## Coal.

Aside from water-power the most important factor in modern industrial development is naturally coal. Upon it depends largely the development of all other resources. It is interesting to note that the first commercial coal mine in the United States was opened near Richmond, Va., in 1750. As early as 1828 Virginia produced 100,000 tons. By 1870 the 16 Southern States were producing 10 per cent of the output of the country. This was increased to 30 per cent, or 178,000,000 tons, by 1920. Statistics on the distribution of this tonnage are unnecessary.

The important point is that the surveyed coal-land area of the Southern States amounts to 100,500 square miles. The reserve tonnage estimated by the Bureau of Mines in this area reaches the following tremendous totals: Sub-bituminous (in Texas alone), 23,000,000,000 tons; bituminous and anthracite, 548,000,000,000 tons, or twice that of Great Britain and France. Of the latter 275,000,000,000 tons, or one-half, are in Kentucky and West Virginia.

These figures indicate that a sufficient reserve supply exists to last for years to come. Its development is assured and will, without doubt, proceed with the demand. One area particularly offers opportunity for development at the present time. This is the Deep River field of North Carolina. It is a small field containing a reserve of only 70,000,000 tons, but it is so situated as to have a well-defined market of its own. Two mines are now in operation in the field, but their output has been small on account of lack of capital. The coal is a high-volatile bituminous and particularly suitable for pulverizing.

## Petroleum.

Of even greater importance than coal in the recent development of the South has been the production of petroleum. Petroleum is now being produced in seven of the 16 States. In 1923 the South produced 368,000,000 barrels out of a total of 732,000,000 for the United States, or one-third of the world's production. Oklahoma and Texas produced 200,000,000 barrels of this amount. The Southern refineries are manufacturing practically all of this oil in 300 refineries.

The estimated reserves in the known fields of the South amount to over 5,000,000,000 barrels, or 55 per cent of the United States total.

From present indications there seems to be little likelihood of developing additional fields, so that within a few years this valuable resource will be exhausted. It has, however, played its part at the opportune moment.

## Clays and Shales.

In the minds of mining men it will be difficult to stir up any great enthusiasm over the lowly non-metallics, clays and shales, but in the eyes of the Southerner they stand out among his other valuable resources as a tremendous asset. Unlike other old sections, the South has used few structural clay products until recently, due to the cheap timber available. With the depletion of the timber and the advent of industrial expansion the shales and clays are being rapidly developed. Every Southern State seems to have been endowed with unlimited reserves of high-grade red-burning material of the highest quality, and while new clay products plants of the latest type continue to be erected in every section, the demand keeps ahead of the supply. The 1926 production of clays and clay products will exceed \$100,000,000 in value.

The production in West Virginia and Missouri exceeds \$15,000,000, while that of Georgia already exceeds \$7,500,000, and a number of the States are producing products with a value of from \$3,000,000 to \$4,000,000 per annum.

In reserves of the finer grades of clay, including the residual and sedimentary kaolins, ball clays and china clays, the Southern States stand practically alone in this country. Practically all of the American residual kaolin used in the white-ware industries of the country is mined in North Carolina. The reserves of this mineral in North Carolina have not been estimated, but they are large, and to date have scarcely been touched.

The white sedimentary kaolins of Georgia, South Carolina and Florida probably constitute one of the South's most valuable resources. In Georgia these kaolins occur in an almost continuous deposit, extending from Augusta on one side of the State to Columbus on the other, over a width of from 10 to 20 miles. Over large areas the deposits are 40 feet thick. The reserves are so great as to make apparently ridiculous figures. South Carolina and Florida also have reserves so large they are difficult to estimate.

These clays are used in white wares and as rubber and paper fillers and for the manufacture of refractories and white brick. As half of the white clay used in all the white-ware industries of this country is imported from Great Britain, there is a splendid opportunity for the further development of these deposits.

Mississippi, Arkansas, Texas, Missouri and Alabama also have large deposits of kaolin which have not been developed.

All the white-burning ball clay used is mined in Tennessee and Kentucky. The reserves, which have never been estimated, are large. Mississippi also has large areas underlain with ball clays which appear to be of excellent quality, but which have never been developed. Some of these deposits are 50 feet thick. High-grade fire clays, so necessary in the development of industry, occur in Kentucky, West Virginia, Alabama, Georgia, Missouri and Arkansas in practically unlimited quantities. At this time there are but three fire-brick plants south of Kentucky, two of them very small. Considerably over three-quarters of the South's requirements are shipped from points north of the Tennessee-Kentucky line.

The same shales which are valuable for the manufacture of clay products are also available for Portland cement in connection with the limestone and marl deposits which abound in all of the States. As in the clay-products industries, new cement plants have been going up in all parts of

\*Address delivered before the 29th Annual Convention of the American Mining Congress on December 8, Washington, D. C.

the South without the saturation point apparently having been reached. It is estimated that last year the South used 35,000,000 barrels, or 25 per cent of the country's output, and that about half of this was produced in the Southern States. The proximity of white limes and marbles and suitable white clays in Georgia, North Carolina and Florida offer a splendid opportunity for the manufacture of white cement, the demand for which, especially in the South, is growing rapidly. As yet no white cement is manufactured in this section.

#### Marbles, Limestones and Granites.

The South is rapidly coming to the front as the country's chief producer of fine decorative marbles and granites.

Already Georgia ranks second in the production of marble, with an annual production of 60,000 tons, valued at \$2,750,000. Georgia marble was used in the statue of Lincoln in the Lincoln Memorial in Washington. Georgia granites rank equal to those of Vermont in color and texture, and the value of their production has reached \$1,000,000 a year.

The famous "Holston" marble of Tennessee is in great demand for interiors, as are several of the marbles of North Carolina and Missouri. The Tennessee marble industry produces \$2,500,000 per year.

The "Anderson" granite of South Carolina and the "Mount Airy" granite of North Carolina have also become famous, the latter being specified for the new Arlington Memorial Bridge over the Potomac. The granite production of North Carolina is valued at over \$3,500,000 per annum.

The Coquina, or shell rock, on the east coast of Florida was long used as a building material. It is also being used extensively for interior decoration, and large developments are promised. This rock is so artistic and so easily worked that its future is assured. The reserves are very large.

Even with the development that has already taken place the marble, limestone and granite industries of the South have scarcely scratched the possibilities offered. Practically none of the plants can compare with those of Vermont and Indiana, and the maximum development cannot take place until they do.

#### Bauxite.

All of the country's deposits of bauxite ore, the only commercial source of the metal aluminum, are located in the South. Ninety-four per cent is mined in Arkansas alone. This State produces 500,000 tons per annum, with a value of \$3,000,000. Practically all of the ore is produced in the Southern States.

Georgia and Alabama have larger reserves of low-grade ore, running from 50 to 60 per cent aluminum oxide, which are at present available for refractories, but which later will be available for the production of aluminum when the richer ores are exhausted.

#### Gypsum.

Oklahoma, Texas and Virginia produce one-eighth of the total gypsum output of the country, or approximately 650,000 tons. The reserves of Oklahoma, which have as yet been scarcely touched, are estimated at 123,000,000,000 tons.

#### Phosphate Rock.

Commercial deposits of phosphate rock, one of the three essential elements of plant food, exist in Florida, Tennessee, Arkansas, South Carolina and Kentucky. The estimated reserves of these States cover 327,000,000 acres. Of this, Florida has 212,000,000 and Tennessee 85,000,000.

Florida leads in the production of phosphate rock, with 3,370,000 long tons in 1920, valued at \$20,000,000. The deposits of high-grade rock in this State are still capable of tremendous development. The somewhat lower-grade rock of the other States will remain in reserve until the richer deposits are exhausted.

#### Barytes.

Practically the entire country's production of barytes, valued at \$1,000,00 per annum, come from the South—Georgia, Tennessee and Missouri being the producers. The reserves will continue to produce at the present rate for years to come.

#### Sulphur.

The sulphur deposits of the South are so large as to be beyond estimate. One single Louisiana deposit produced \$119,000,000 worth of the mineral in the last 20 years. The deposits of Texas are being developed, and this State will continue indefinitely to not only supply any demand which may arise but to control the world price on this mineral.

#### Salt.

Louisiana and Texas contain enormous deposits of salt. A single deposit of salt at Avery's Island, La., is estimated to contain 2,000,000,000 tons. This as well as other deposits are so pure as to require no refining. Louisiana's reserves are estimated at 50,000,000,000 tons. The annual production of the two States is valued at \$2,250,000.

A number of the Texas deposits contain considerable percentage of potash.

#### Fuller's Earth.

Florida, Georgia and Texas produce 92 per cent of the country's output of fuller's earth, amounting to 138,000 tons, valued at \$2,000,000. Florida, with the largest reserves, produces one-half of the total. Georgia contains reserves so large that no attempts have been made to estimate them.

#### Asphalt.

Asphalt stands out as one of the valuable minerals which has not been developed. The deposits of Oklahoma have been estimated to contain billions of tons of a grade equal to the best. There can be no question of their development in the future.

#### Miscellaneous.

Among the non-metallics not listed above, the feldspars of North Carolina stand out as of growing importance. This State produces 47 per cent of the country's consumption, valued at \$400,000, with the output growing steadily. The reserves of this mineral, which have never been estimated, have scarcely been touched as yet.

The talc, pyrophyllite and mica deposits of Georgia, Virginia and North Carolina are attracting attention and development is increasing.

The development here outlined is for the most part of recent origin. One has to travel over the South in order to realize what vast areas containing both metallic and non-metallic resources have as yet been untouched. Capital, not yet available in the South, is needed for this work. This money must come from the financial centers, and as capital is always available for good investments, it is now up to the South to call attention to its possibilities.

Much remains to be done by the geological surveys and other agencies of the various States along the lines of more definite surveys and the publication of information in such form as to be of value to investors. A piece of work of tremendous value along these lines has been done by Dr. Henry Mace Payne, with funds provided by this Congress, and his report should be made available as soon as possible. Some work is being done in most of the States by competent engineers and geologists, with the result that new capital is pouring in and the South is rapidly increasing its quota toward the wealth of the country.

Voters of New Orleans, La., have approved a bond issue of \$7,500,000 to provide funds for public improvements.



### Pending Measures for Cotton Relief.

Washington, December 11—[Special.]—Southern Congressmen have introduced several bills for relief of the cotton farmer, ranging from a simple abolition of the semi-monthly cotton-crop reports to a price-fixing, production-limiting Federal cotton corporation.

The 1926 production of 18,618,000 bales, the largest in history, has created a surplus of cotton, just as two years ago there was a wheat surplus and a year ago there was a corn surplus. Cotton costs 18 cents a pound to produce, the Agriculture Department estimates, and a general estimate of the average price this year is 12 cents a pound.

The frequency and the nature of the semi-monthly cotton crops of the United States Department of Agriculture are given by some Southern Congressmen as one factor in the slump of the cotton market. Drops in prices of \$21.35 and \$23.45 a bale, after the first two reports of this season, and drops after each successive report this fall are cited as examples of what these crops do to demoralize the market. Some measures now before Congress to abolish or alter the system of cotton crop reporting are:

A bill to repeal the law authorizing the Department of Agriculture to make estimates of the probable extent of the cotton crop, based on planted acreage, simultaneously with the ginning reports made by the Census Bureau of the United States Department of Agriculture; introduced by Representative William C. Wright of Georgia.

Bills to amend the cotton-reporting laws so that only seven ginning reports instead of twelve, as at present, and only four crop forecasts, instead of nine as at present, would be made; introduced by Representative Eugene Black of Texas.

A bill to prohibit the director of the census and the Secretary of Agriculture from publishing any forecasts of the probable cotton crop and authorizing them to report only the actual weight of the cotton ginned and the actual number of bales of cotton baled, and requiring them also to report the total weight and number of bales of cotton which may be destroyed by weather or fire; introduced by Representative William A. Oldfield of Arkansas.

A bill providing that the Secretary of Agriculture shall make only four cotton-crop forecasts instead of nine, as at present; that he shall likewise make a report on July 1 showing the number of acres of cotton under cultivation and reports on September 1 and December 1 showing the number of acres abandoned since July 1, and that he shall also report the grades and qualities of cotton in the warehouses and his estimate of the grades and qualities of that which is being produced; introduced by Representative Marvin Jones of Texas.

Senator William J. Harris of Georgia has introduced a resolution calling on the Secretary of Commerce to investigate (1) the development of new uses to which cotton and cotton products can be placed; (2) the possibility of using the lower grades of cotton in the manufacture of cloth and other cotton products for use by the Federal Government; (3) with the co-operation of the Secretary of Agriculture, the possibility of using the lower grades of cotton for cotton bagging. Jute, a foreign product, is now used for cotton bagging, and such bagging is deducted as tare in weighing baled cotton, causing a loss to the cotton producer, the resolution points out.

Representative William C. Lankford, also of Georgia, has introduced a bill to set a minimum price and to provide means for limiting the production of cotton in accordance with the demand. This bill provides for a Government-owned, Government-financed, Government officered and controlled corporation, with enough capital and power to buy, if necessary, all cotton produced in the United States at 22 cents a pound basis, good middling. The corporation would have no authority to pay more than 22 cents a pound, but must at all times stand ready to buy, and actually buy, all cotton offered at 22 cents a pound cash. If cotton goes above this price, the corporation ceases to buy. Cotton could not go below 22 cents, for the corporation would always stand

ready to buy at 22 cents. The corporation would be authorized to sell the cotton so bought at not less than 22 cents per pound, plus 2 cents profit and all costs, such as interest, storage and other overhead, the profit to go toward retiring the \$500,000,000 capital stock provided in the bill.

Authority is provided by the bill for the corporation to reduce the amount of cotton acreage to be planted, without payment of an equalization fee, provided it be determined by the directors that this is necessary in order not to produce more cotton than is needed by the world market. The corporation would be authorized to stimulate and encourage the use of cotton goods so as to create, if possible, a market for all cotton produced.

### Permanent Control of Cotton Production.

By SETH C. REYNOLDS, Ashdown, Ark.

The plan to remove 4,000,000 bales of cotton from the market is a commendable effort on the part of the Southern governors and bankers and others prominent in this movement. If this plan is put into immediate effect, it will save the cotton farmers millions of dollars. This plan is rather temporary in its nature, however.

A plan more permanent in its scope and purpose is the organization of cotton marketing associations. The present cotton marketing association, if continued under wise management and supported more heartily and widely both by bankers and cotton farmers, will go far toward solving the cotton problem. Too much cannot be said in behalf of the cotton co-operative marketing idea. The cotton crop of the South is too valuable and too big to be marketed so unsystematically as it has been in the past.

The permanent solution of our present condition is the "food and feed route"; that is, for every cotton farmer to raise enough food and feed for his home use—not to sell—and then to plant the balance of his land in cotton for his money crop. The idea is for the cotton farmer to raise food and feed for home consumption and let the truck grower supply the markets with food products.

In 1927, because of the large cotton crop of last year and this year, wisdom would direct one-half of the cultivated lands of the South be planted in food and feed and the other half in cotton. In 1928 and succeeding years one-third of the South's farm land would supply the farmers of the South their food and feed and the other two-thirds would supply the world all the cotton it needs, when supplemented by the cotton raised in Egypt, India and other countries. If the farm lands of the South should be planted in food and feed during the next few years in the proportion suggested, this would automatically cut the cotton acreage to such an extent that the yield in cotton next year would be at least 6,000,000 bales below the production of this year, and in the fall of 1927 the farmer would be getting 25 or 30 cents a pound for his cotton, a fair profit, and at the same time would have sufficient feed and food to meet his demands through the fall, winter and following spring. This would enable him to apply practically all the money derived from the sale of his cotton crop in 1927 to the payment of his debts, and but little of it would be used in bearing the expenses incident to gathering the crop. As it is today, he is forced to use a large part of the cotton he is picking to meet his food and feed bills, and since the price is so low—at least one-third below the cost of production—it leaves him very little money to apply on the expenses incurred in making this crop. If the farmer is not permitted to use a good percentage of the proceeds of his cotton to bear his immediate living expenses, he will be forced to abandon the crop; and, as it is, thousands of the farmers have become

so discouraged that no doubt 2,000,000 or 3,000,000 bales of this present crop will never be picked.

But you say, "I have heard all this before. The plan suggested, if carried out, would do what you say it would, but how are you going to get the farmers to do this?"

The answer is this: Let every banker and credit merchant in the South, in dealing with the cotton farmer next spring, make "food, feed and thrift" the basis of credit, and let every farmer's note be accompanied by a pledge that at least one-third of his land next year—half would be better—will be planted in food and feed, and further stipulate that additional credit will not be extended and that all notes shall mature upon the farmer's failure to cultivate his food and feed crop in a husbandlike manner.

The objection is at once raised that the banker cannot tell the farmer just how many potatoes and how many bushels of corn he must raise. He may not do this, and need not do it, but he can fix the basis of credit upon which he will make loans to the farmer, and unless this credit basis is met he can respectfully decline to make the loan. Every loan company passes upon the security offered for a loan, and has a right to pass upon it. A loan from a bank to a farmer is, and should be, governed by the same principle. The banker has always made cotton the basis of credit. Finding this is unsound and often disastrous, he should make food and feed the basis of credit, or, better still, food, feed and cotton in proportionate quantities.

This policy is safe, sound and practicable. The bankers of the South can set up sufficient machinery to put it into effect. It is a question of business, and if undertaken in the spirit of co-operation the farmers will lend their support. The time demands the inauguration of such a policy. The banker is the Joshua of the hour. Let him put it over, and in a few years the cotton farmers will be a prosperous and a happy people.

### Colonel Pryor Suggests That the South Should Raise No Cotton Whatever Next Year.

San Antonio, Texas, December 10—[Special.]—Col. Ike T. Pryor of San Antonio, multimillionaire ranchman and farmer, and one of the largest cotton growers in Texas, believes the depressed conditions resulting from the low price of cotton could be overcome by the abandonment for one year of all cotton production in the South. He says he owns 11 large farms upon which cotton is grown and that it would be both to the interest of himself and his tenant farmers if the non-cotton-growing plan was adopted.

"Just think what a wonderful influence it would have on the producer and consumer of cotton if they knew there would not be one acre of cotton planted in the United States in 1927. It would not only put the price of the present crop up to a high point, but it would also take four or five years for the producer to catch up with the consumer after staying off production for one year.

"The question is how this result can be accomplished. I would suggest that the Governor of each cotton-growing State request the county judge of each county in his State to call a meeting of everyone in said county who produces or causes cotton to be produced and secure from him a pledge that he will not plant any cotton in the year 1927. At the same time have these county judges call to their county-seats everyone who owns or operates a gin in said county and get his agreement not to gin a bale of cotton raised in 1927. This completed, the Governor of each State should call the county judges to their respective capitals and from this gathering organize or select a State committee to meet and co-operate with similar committees from all of the other cotton-growing States."

### Urges That If Farmers Would Live on Home-Raised Products and Develop Thrift in Its Broadest Sense There Would Be No Need for Farm Legislation.

Martin, Tenn.

*Editor Manufacturers Record:*

From time to time I read in the MANUFACTURERS RECORD views and suggestions as to what the farmer needs; they range from easy money for the farmer to Federal aid in stabilizing crop prices, etc. Some border close on paternalism. Will you allow me to set forth a few facts as I have observed them?

A great many stress liberal loans at low rates of interest for the farmer. Now, it has been apparent to me for some time that in doing something for the farmer the Government, through its farm loan Act and farm land banks, has in fact, *done* the farmer. Dozens of farmers got along without a loan on their lands until this Act made farm loans at low rates and long-time payments possible. Then, they forthwith plastered the good old place with a long-time loan; some spent the money in acquiring more lands and others in so-called improvements. In 9 out of 10 cases, coming under my observation, they added little to their producing capacity. My father, who had been a leading farmer in southern Kentucky for more than 30 years without ever having a mortgage on his 800 acres of land, took a long-term loan at a low rate of interest, and now the good old place is plastered with a mortgage. The money was used to acquire more land that was thought to be in line for subdivision purposes, bordering on a good little city in central Kentucky. Since the war prices have been deflated, farm values—along with other values—are down, and it will take several years for them to increase sufficiently for him to realize values that existed at the time of the loan.

I know other farmers who expanded, or tried to do so, and in many instances the loan now on their farms represents close to what they would be able to sell the farm for at this time. Had there been no long-term loans possible at what they considered low interest rates, they would not owe a penny on their farms today. I know where farmers bought high-priced lands during the period of inflation, paid a substantial amount on them and later turned them back to the seller for the amount yet owing. I believe I could safely say that there are 100 instances of this kind with which I am familiar. Taking the sections of the country I am not familiar with, and using the same ratio, we will find the rate of borrowing easy money appalling. This, I contend, is one vital point in the argument and shows the farmer does not need easy money. It has been made too easy for him heretofore, and has been partly responsible for his undoing.

Now for another point. Thrift has been forgotten in this day of fast and furious living. I traversed by auto sections of Illinois, Indiana, Kentucky, Tennessee and Mississippi this summer. There were dozens of farming implements—some costly—that had been left in the fields or out in the weather for months, often left where last used, all rusting out and deteriorating rapidly. The loss from want of proper care on farm equipment must be enormous. Our farm rules were to clean and grease all parts that would rust, pack all bearings full of lubricant and put in the shelter until the next season for its use came around.

By this method of caring for farm equipment its useful life was greatly extended and breakdowns and repairs reduced to a minimum. I am sure we got many more years of life from our equipment than is the case with the general run of farmers today.

For the third and last point I wish to add this thought:



Many farmers buy their foodstuffs from the grocer or their supply house. They calculate often that they buy many foodstuffs cheaper than it is possible for them to raise. On our farm we grew everything that was needed for human consumption, with generally an excess to be sold in town. Apples, cabbages, turnips, potatoes, beets, etc., were put up and used most all winter long, or until they were too old for consumption. The fruits and vegetables that would not keep in their raw state were canned in sufficient amount to last through to a new crop. To good foods and careful living we owed our good health. In a family of eight children, mother, father and grandmother, I do not believe our doctor's bill over a 20-year period would reach \$100. It is a mistaken notion that a farmer can buy foodstuffs more cheaply than he can raise them. If his time was all for sale profitably, that might be true, but such is not the case, and a farmer should make use of all his time. During seasons when we could not work the farm—winter months—all fences and outhouses, barns, etc., were put in repair, so that little time was wasted.

Today we find farmers' boys and girls going to the city. They have a car, ride in to the shows at night during work seasons and, in general, keep up with their city cousins. In employment at some useful task there lies contentment. In pursuit of fads and fancies there is no contentment, and to this is attributable many of the ills of the day. This is a restless age and it has not missed the farmer.

My personal belief is that only through marketing associations and crop diversification, thrift and a return to old-time ways of living, such as I have mentioned, will come relief to the farmer. It must come largely from within, not from without, his ranks.

F. S. PARRIGIN.

### For Financing \$5,000,000 of South Carolina Cotton.

Columbia, S. C.—Planning to finance approximately \$5,000,000 worth of the present cotton crop in this State, the South Carolina Cotton Finance Company has incorporated with an authorized capital stock of \$500,000, of which 20 per cent has been paid in, with the remainder to be paid when called for by the directors. Officers of the company include James E. Peurifoy, Walterboro, S. C., president; Bright Williamson, vice-president, and August Kohn of this city, secretary and treasurer.

### To Exhibit Peanut Products.

Windsor, N. C.—Plans are being made for a proposed Eastern Virginia and Carolina Peanut Show to be opened here on December 27, when various products of the peanut will be exhibited. The show is being sponsored by the Eastern Carolina Chamber of Commerce, Kinston, and it is announced that Dr. George W. Carver, negro scientist of Tuskegee Institute, will display a large number of products he has succeeded in making from peanuts. Many growers and dealers, as well as manufacturers of peanut products, will also enter exhibits.

### For \$1,000,000 Hotel at Mineral Wells.

Mineral Wells, Texas.—Construction is expected to begin soon on a \$1,000,000 hotel to be erected here by the Mineral Wells Hotel Company, A. E. Eaton, president. The structure will be eight stories, fireproof, of reinforced concrete, brick and stone, and will contain 250 rooms. Wyatt C. Hedrick of Fort Worth is the architect; Hoge & Burgher of Dallas are general contractors. The hotel will be operated by Baker Hotels, Inc., San Antonio.

### December Cotton Estimates Still Higher.

According to the December 1 cotton estimate of the Department of Agriculture, production this year will probably be 9,309,000,000 pounds of lint, or 18,618,000 bales of 500 pounds each. Thus this year's crop will be by far the largest ever raised in the United States. The total production of 1925 was 16,103,679 bales, or 11,517,399 bales for the five-year average 1921-1925.

The December revised estimate of area of cotton for harvest in 1926 is 47,653,000 acres, compared with 46,053,000 acres in 1925 and 37,616,000 acres the average for the five years 1921-1925.

It is of interest that the greatest increase in cotton acreage this year was in the Southwestern States. The States of the Southeast increased cotton acreage very little and some even reported a smaller acreage this year than was harvested in 1925.

#### ESTIMATED COTTON AREA AND PRODUCTION BY STATES.

State	Area 1926. For harvest (Dec. est.)	Production (not including "linters").* (Bales of 500 lbs. gross weight.)	
		Estimate Dec. 1, 1926. Bales.	Final census 1925. Bales.
Virginia	101,000	55,000	52,535
North Carolina	2,023,000	1,250,000	1,101,799
South Carolina	2,732,000	1,030,000	888,666
Georgia	4,029,000	1,475,000	1,163,885
Florida	109,000	33,000	38,182
Missouri	488,000	255,000	294,262
Tennessee	1,178,000	475,000	517,276
Alabama	3,713,000	1,490,000	1,356,719
Mississippi	3,768,000	1,930,000	1,990,537
Louisiana	1,960,000	820,000	910,468
Texas	18,363,000	5,900,000	4,165,374
Oklahoma	4,912,000	1,950,000	1,691,000
Arkansas	3,782,000	1,620,000	1,604,628
New Mexico	120,000	72,000	64,444
Arizona	167,000	115,000	118,588
California	160,000	128,000	121,795
All other	48,000	20,000	23,521
U. S. total	47,653,000	18,618,000	16,103,679

\*Production of linters usually about 6 per cent as much as the lint.

Allowance has been made for the probability of some loss of open cotton from beating storms and for the tendency of growers to leave low-grade cotton unpicked because of the low prices.

With the large amount of cotton still remaining to be picked, particularly in the western portion of the belt, the final ginnings are more dependent than usual on weather conditions after this date. Unfavorable weather conditions during December and January might easily increase the quantity of cotton left unpicked beyond that allowed for in this estimate. On the other hand, a continuation of favorable weather might reduce the quantity of cotton that will not be picked.

### Coral Gables Votes \$4,532,000 of Bonds.

Coral Gables, Fla.—By a vote of about four to one Coral Gables has approved a bond issue of \$4,532,000 for municipal purposes, including \$1,782,000 to acquire the street railway and bus system. Other items embrace the following: Golf course, \$1,750,000; swimming pool, \$200,000; auditorium, \$300,000; parks and playgrounds, \$100,000; additional fire stations, \$100,000; emergency hospital, \$50,000, and city hall, \$250,000.

### Arlington County Sells \$540,000 Water Bonds.

William H. Duncan, Clarendon, Va., clerk of the Board of Supervisors of Arlington County, advises the MANUFACTURERS RECORD that remaining water bonds in the amount of \$540,000 have been sold privately by the Board of Supervisors to the Guaranty Company of New York at par. The bonds will bear an interest rate of 4½ per cent and mature serially from 1935 to 1950.

# Cutting Production Costs on Southern Farms Through Use of Modern Equipment.

By E. A. HUNGER, International Harvester Company of America.

The Farmall, an all-purpose tractor recently placed on the market for general distribution by the International Harvester Company, is proving its worth on many a Southern plantation. It is a great labor saver; it lends itself particularly well to the production of cotton; it speeds up the work of tillage, planting and row-crop cultivation; it relieves to a considerable extent the planter's dependence on uncertain negro labor, and, at the same time, it is so easy to operate that the average plantation negro can readily be trained to run it; it enables the planter to reduce the number of his mules and thus cut down on expensive feed bills.

Inquiries in southern Texas this year have brought out the fact that on an average the Farmall replaces eight mules. With one man to operate, as against at least two men to drive two teams of four mules each, and with the cost of feeding a mule about \$150 a year, the advantage of using the machine for reducing production costs is apparent. One Texas grower said that with it he can produce cotton at 9 cents a pound and make money. This is a very favorable figure in comparison with 12 to 15 cents or more, which authorities say it costs in other sections of the South to produce a pound of cotton.

In construction, the Farmall differs radically in certain respects from other tractors. Its rear axle is built high, with a clearance of 30 inches above ground, and the rear drive wheels, which are 42 inches in diameter, are wide apart—74 inches between centers of wheels. This means that the axle is high enough to clear corn or cotton as well as is done by the ordinary riding cultivator and the wheels are far enough apart to straddle two rows and thus cultivate two rows at a time. In some places in Texas it is used to cultivate four and six rows of cotton at one time. The cultivator is placed in front, where the operator can carefully watch his work, and is guided by the steering wheel. The front wheels, 25 inches in diameter, are close together and run between the rows.

Steering is accomplished through a long horizontal shaft connected by spur and bevel gears to a vertical shaft fastened to the short front axle. In making short turns, a brake works automatically on the inside rear wheel and the Farmall

then turns on that wheel as a pivot, the turning radius being only eight feet. This is a great advantage in cultivating row crops, because it permits short turns at the ends of rows. The operator sits high, where he is free of dust and where he has a good view ahead.

Cultivation of row crops by means of horses and mules has always been costly and slow, and it is in this work especially that Farmall power is playing a stellar role as a substitute for horse-and-mule power. Cultivation can be done in low, intermediate or high speed—2, 3 or 4 miles, respectively—depending on the condition of the crop height, etc. The two-row cultivator enables one man to cultivate 20 to 30 acres of cotton a day and with the four-row practically twice that acreage. Better cultivation can also be attained, for with



OPERATING SIX-ROW COTTON DUSTER.

the greater speeds possible the cultivator throws the soil just enough to cover the weeds near the plants and permits the gangs to run sufficiently far away so as not to injure them.

In planting, either two or four rows may be planted at one time. In planting corn or cotton two rows at a time, the Farmall easily covers 20 to 30 acres a day. This is about twice as much as can be done with a team. If four rows are planted, this acreage can be practically doubled. By working more than 10 hours 60 to 70 acres of cotton are often planted in one day. The easy steering and control make it possible to plant straight rows with remarkable facility.



FARMALL TRACTOR WITH SWEEP RAKE EMPTY—ON WILL DOCKERY PLANTATION, DOCKERY, MISS.



With such efficient equipment, the cottonseed may be put into the ground when conditions are at their best. Where checking is done, the steady, even power and the straightforward travel of the tractor results in a better cross-check than can be obtained with animal power.

The machine fits in well as a time and labor saver in making hay, and, as everybody knows, there is a real need for more hay production in the South. Here, again, the Farmall is increasingly being utilized in harvesting hay crops. The accompanying illustration shows how it is employed to harvest a bumper crop of soybean hay, mammoth yellow variety, on a 40-acre plot on the Will Dockery plantation, Dockery, Miss. With mules frequent stops for rest would have been neces-



SPECIAL MOWER, OPERATED BY POWER FROM TRACTOR, CUTTING MAMMOTH YELLOW SOYBEANS FOR HAY.

sary in making a single round of the field, but the machine, with special seven-foot mower, operated by power taken directly from the tractor engine by a power take-off device, went steadily without a stop and with a minimum of effort on the part of the driver. With this combination one man can cut 20 to 25 acres a day, replacing two to three men and four to six mules. After cutting the hay, the machine can be used to pull tedder, side-delivery rake, hay loader or push special sweep rake, as shown in another of the illustrations, also taken on the Dockery plantation. The machine will do the hauling and when baling is to be done it will run the baler.

With its power take-off attachment, the Farmall is well adapted for pulling the tractor binder and corn picker. In plowing it will pull two bottoms, and under average conditions it will plow seven to eight acres a day, equivalent to the work of two men and seven or eight horses. It will also bed up or list more than 20 acres a day, doing the work of two men and six to eight horses. With its belt pulley, too, it is able to do numerous belt jobs.

Will Dockery, mentioned above, who operates a 6000-acre plantation at Dockery, Miss., and who owns other plantations in other parts of Mississippi and in Arkansas, with an added area of 9000 acres, has had some interesting experiences with two Farmalls the past season, and, based on the performance of these two machines, is contemplating the purchase of four additional units. On the 6000-acre plantation at Dockery he had 2500 acres in cotton, 500 acres in soybeans, 500 acres in corn, 40 acres in sagrain and 40 acres in alfalfa. The two Farmalls were used to plow 400 acres, to disk the land for the soybeans and to plant the soybeans; to cultivate 100 acres of corn four times, to mow the alfalfa and soybeans, to harvest the sagrain in bundles with corn binder, as shown in one of the illustrations—a new stunt worked out on

the Dockery plantation to harvest this new crop—and to plant and cultivate a considerable acreage of cotton. Mr. Dockery dwelt particularly on the advantage of using the machine in disking. He loves the mule, but it breaks his heart to see four big mules that are necessary to do the job



TRACTOR WITH CORN BINDER CUTTING AND HANDLING SAGRAIN.

virtually kill themselves doing the work. With a Farmall, he said, they can disk 18 acres a day, while with four mules, weighing at least a total of 5000 pounds, they are doing very well in covering five acres a day. In other words, the machine in disking with one man does the work of 12 to 16 mules with four men.

According to Mr. Dockery, the ordinary plantation negroes are readily trained to operate the Farmall and the men selected to run the tractors evince pride in the work. When told that some planters hesitate putting negroes at work operating tractors, Mr. Dockery said that negroes in increasing numbers were running cheap automobiles without any apparent difficulty and that it is just as easy to run a tractor as a car.

The machine is meeting a real need in fighting the boll weevil. As is well known, calcium arsenate as a dust applied at night, when the dew helps to hold it to the plant, is a prac-



SWEEP RAKE LOADED WITH SOYBEAN HAY.

tical way of poisoning the South's major cotton pest. The Farmall, equipped with electric lights and a six-row duster, is an ideal machine for the work. By operating at a speed of four miles an hour, one man can cover 100 or more acres in one night's time. One of the illustrations shows a Farmall and six-row duster performing a typical boll-weevil eradicating job. With this outfit, the task of fighting the boll-weevil is greatly simplified.

The city of Ruston, La., will receive bids until January 4 for the construction of three disposal plants and the installation of approximately 30,000 feet of 8-inch and 10-inch sewer mains, plans for which are on file at the office of E. T. Archer & Co., engineers, Shreveport, La.

### Muscle Shoals Problems Before Congress.

Washington, December 11—[Special.]—Radical conflicts in opinions of leaders in the Senate and House of Representatives over the disposition of Muscle Shoals are paving the way for another legislative battle over the subject in the current session of Congress. The bill proposing the leasing of the plants to a group of Southern power companies is about to come up, with the outcome uncertain, but Senator Deneen of Illinois, who heads the committee which submitted this proposal, and some of the Administration leaders in Congress may make a bid for action.

A new angle in the situation has just developed, in the form of a bill, introduced in the Senate by Senator Ernst of Kentucky and in the House by Congressman Carroll Reece of Tennessee, to provide for the lease of Muscle Shoals for a term of 50 years to a corporation which would manufacture and sell fertilizer at cost. This measure is sponsored by C. Bascom Sloop, former Representative and former secretary to President Coolidge.

Muscle Shoals is and has been for five years the outstanding subject of interest to the electrical industry at Washington. For many years Senator George W. Norris of Nebraska has been chairman of the Senate Committee on Agriculture and Forestry, and he believes the Government ought to run the power business. On that committee he is succeeded as chairman by Senator Charles L. McNary of Oregon, who holds many of the same opinions, but who is utterly opposed to the Government engaging in the power business. He stood at the right hand of Senator Norris all through the fight against the Ford offer for Muscle Shoals.

Senator McNary says that he has always supported Government operation of the Muscle Shoals plant for the production of nitrates in time of war and fertilizers in time of peace, and expects to continue to do so. He holds that the plant was built with the intention of taking whatever advantage there may be of this natural power resources for the benefit of the people; first, for national defense, and, second, for fertilizers for peace-time uses. Muscle Shoals and the Colorado River project stand out in his mind as on a parity. Both problems have national aspects, he thinks—Muscle Shoals in its relation to national defense and the Colorado River and the Boulder Canyon Dam project in relation to flood control. The production and disposition of power at both of these projects, to his mind, are incidental.

Senator McNary believes that the Government should operate the nitrate plants or build new ones or additions to the present ones at Muscle Shoals for the production of fertilizers. He is not in favor, however, of the Government going into the power business. He believes that the surplus energy developed at Muscle Shoals should be sold or leased to private parties, giving the preference of rights of purchase first to municipalities which might do their own distribution and supply power to users at a low cost, rather than to private parties or corporations which would add a profit before the power reached the consumer. He is emphatic in expressing himself as against the Government going into the power business.

At the last session of Congress a joint committee of the House and Senate which had dealt with all of the proposed bidders for Muscle Shoals made a report, which is now on the calendars of both Houses awaiting action, recommending acceptance the offer made for Muscle Shoals by a combination of the following power companies: Tennessee Electric Power Company, Chattanooga, Tenn.; Memphis Power and Light Company, Memphis, Tenn.; Mississippi Power Company, Gulfport, Miss.; Mississippi Power and Light Company, Jackson, Miss.; Mississippi Delta Power and Light Company, Greenville, Miss.; Alabama Power Company, Birmingham, Ala.;

Gulf Power Company, Pensacola, Fla.; Kentucky Utilities Company, Louisville, Ky.; Gulf Electric Company, Mobile, Ala.; Georgia Railway and Power Company, Atlanta, Ga.; Louisiana Power and Light Company, Monroe, La.; Arkansas Light and Power Company, Pine Bluff, Ark., and New Orleans Public Service, Inc., New Orleans, La.

The Joint Congressional committee negotiated a contract with the power companies, after deciding that all other offers by other bidders were inadequate, and under the contract now pending before Congress the power companies agreed to make fertilizer and to distribute all of the electrical energy not needed for fertilizer equitably in the surrounding States as required by Congress. Senator Deneen hopes to get action on the report in the Senate shortly. Senator McNary is against such an arrangement.

The new Ernst bill, just introduced, proposes to incorporate the "Farmers Federated Fertilizer Corporation" and to lease to this corporation for 50 years, under quasi-Federal control, the Muscle Shoals property in Alabama. Incorporators of the proposed corporation are John W. Newman of Versailles, Ky.; A. P. Sandles of Ottawa, Ohio, and A. L. Sponsler of Hutchinson, Kan., each a former director of agriculture in his State. This bill makes the interests of agriculture permanent in the disposition of Muscle Shoals through the manufacture and sale of fertilizer at cost, while at the same time, it is claimed by its sponsors, it gives the Government a greater financial return than is offered by other interests seeking the lease.

The corporation, according to the plan, would rely for a return on its financial investment upon the sale of by-products and excess power. Provision is made by the bill for manufacture of nitrates in war time and for conversion of the plant to such uses upon demand of the Government.

### Water-Supply Plans for Jacksonville.

Outlining the work of the Water Supply Commission of Jacksonville in its survey and study of plans for a water supply, Whipple Bishop, assistant secretary, advises the MANUFACTURERS RECORD that the commission has employed the engineering firm of Hazen & Whipple, New York city, to make an investigation, survey and report of the present potable water supply of the city, its sources and sufficiency, and the possibilities of extensions to meet probable requirements during the next 10 to 20 years. The engineers will also consider sources or supplies other than those mentioned and methods for acquiring, constructing and putting into operation proposed systems. At the conclusion of their investigation they will prepare and submit to the commission a full report, with maps, plans, surveys, estimates, information and suggestions. This report is expected to be submitted about March 1.

The Water Supply Commission of Jacksonville was created last year by an Act of the legislature in extraordinary session. Its members include Frank H. Owen, chairman; W. R. McQuaid, Edward W. Lane, Arthur E. Perry and E. J. L'Engle.

### Rebuilding on Substantial Basis at Hialeah.

Mayor J. P. Grethen of Hialeah, Fla., in a letter to the MANUFACTURERS RECORD says rebuilding in that district is going forward faster than ever before and on a more substantial basis. Further, Mr. Grethen writes:

"I feel Hialeah is the brightest spot in Dade county. The city has two white ways and the entire town is again restored, with complete electric-lighting system throughout the entire city. Improvements of all kinds are being put in, and the future is very bright. In fact, to my mind, based upon progress shown and that now going on, there are more opportunities here than anywhere else in the United States."



# The Forests and the South.

## INTERVIEWS WITH UNCLE SAM.

By CARL WERNICKE.

### Number III.

Uncle Sam's private secretary smiled as I came up, proving that he was human, after all. "You're early," he said, "but go on in. The boss is ready for you."

I had already had two interviews with Uncle Sam on forestry, and had come for another one. Being the head of the biggest business in the world—the United States—Uncle Sam's time is pretty well filled up. It is natural, therefore, that he talked right to the point, and talked fast.

He stood by the window with his back to me when I said "Good morning."

"Yesterday," he began, without turning around, "I explained to you just why the South had to raise pine trees in order to be sure of prosperity for the farmers and the folks in the cities and towns. But the job of raising pine trees is not one to be left to luck and the children. It is a man-sized proposition, and it needs action now."

"There are four big lines of work to be done if the South is going to get results. If it was any other section of the country, I'd be worried about it. But the South has demonstrated the capacity of its people to handle big jobs, so I am confident that just as soon as they know what must be done, they'll do it."

"Indeed, that itself is one of the big lines of work to be done, to teach the people of the South why they need the forests and how to get them. Some way must be found to show the farmers, the merchants, the bankers and the professional people the reasons why they need forests for their own good. Every politician, every editor of a newspaper, every county agricultural agent and all the other leaders of public opinion should not only be well informed on the subject, but kept up to date with the latest information. They should never miss an opportunity to hammer home what they know about it."

"No man living in the states of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana or Texas ought to be called an educated man unless he can talk intelligently on the subject of turpentine-pine trees. No man in these states ought to be called a good business man if he isn't alert to help build up the forests and forest industries."

"But you cannot blame these citizens now when they don't know. They have not had the opportunity to learn what they need to know. To put the information in their hands is a task which requires much effort. It must be done, however, and the quicker the better."

"Anyone who has ever looked into the matter knows that the greatest handicap to raising pine trees in the South is forest fires. Not one good thing can be said for these fires. They are the worst scourge the South ever had. They not only cost money where they burn, but they are leaching the life-blood out of Southern prosperity. Ninety-nine out of a hundred men do not know this."

"The fires must be stopped. Perhaps they cannot be eliminated entirely, but I doubt that. Men can accomplish wonders when they really set out to get results."

"Forest fires have caused losses to the South in the last two decades great enough to finance more than 4000 business enterprises with a million dollars apiece!"

"To stop the fires requires two things, local action and South-wide co-operation. Any locality in the South can prevent fires in its neighborhood. What it needs is, first, the education of everybody in the county to realize how the forest

fires injure him personally, and, second, systematic methods of fighting fires—keeping fires from starting at all, when possible, and putting out those which do start before much damage is done.

"There must be some one or some agency to organize this local sentiment and action in every county. There must be some central headquarters responsible for such organization work all over the South."

"The third big line of action is one of solving the financial problems of raising pine trees. Conditions are such in the turpentine-pine belt that substantial profits can be made by raising pine trees as a crop, but a man cannot take advantage of his opportunities if he cannot finance them. A way, sooner or later, will be found to enable men to borrow money at reasonable rates on growing pine-tree crops. We cannot afford to let this be a business confined to rich men and a few farmers who have wood lots on the side. We must make it an opportunity for many other people."

"This financing problem has many ramifications. We already know that men will not raise pine trees as a crop unless there will be a profit in it, but it is also true that men will not lend money for enterprises which are not profitable. This means that the landowner must make sure that he has markets for what his lands can produce, and that means, in turn, that he must encourage the health, stability and growth of the lumber business, the turpentine and rosin business, the paper industry, the creosoting industry, and even the sheep and cattle businesses."

"If forest fires are controlled and the industries which depend on forest lands are active and healthy, nothing can keep the landowner from making handsome profits when he grows pine trees. Make sure of these two things, and money will not be hard to borrow!"

"The fourth big line of work to be done is to educate the owners of land and the people in the various industries as to the most effective ways of getting results and conducting their affairs for a maximum profit. There should be constant study and research into the technical phases of these things, with a systematic and rapid spread of new and valuable information. While preventing forest fires is the most necessary and immediate job, this matter of constant improvement of technical knowledge will prove to be the source of greatest wealth."

"Now, if you will think it over carefully, you will see that each one of these four big jobs demands organization, not mere getting together once or twice a year, but real business organization designed to get results. Every interest involved, every effort directed toward the end of developing forests, industry and Southern prosperity should be co-ordinated to avoid conflict and duplication. By the right kind of organization, properly directed, the prosperity of the South can be carried beyond that of any other part of the nation."

"And, fortunately for the nation, young man, the South has the genius for organization in its blood, and the initiative and energy to succeed. The South has already started its organization and is already on the way to solve its problems and create its future."

"I have explained the basic reasoning, but if you will go South you will find action."

Uncle Sam had long since turned to face me, and now, preparatory to dismissing me, he sat down.

"Before you go," he said, "I'll add just this: Your Uncle

Sam is willing to help all he can, but he can't help very much until people help themselves."

His eyes twinkled. "You know, that's why I like the South. It is self-reliant. I'll tell you something! When the band plays 'The Star-Spangled Banner,' I stand up and take off my hat, as all good Americans do. But when the band plays Dixie, I get up on a chair and cheer—as all good Americans do!"

Uncle Sam looked at me quizzically a moment, and then, in the most gentle voice I ever heard, he said, "I don't like to have people forget that I was born down in Dixie."

## The Port of West Palm Beach Is Riviera.

Town of Riviera,  
Florida.

December 6

*Editor Manufacturers Record:*

In your issue of December 2 is a short article on port facilities at West Palm Beach.

You may be surprised to know that all the land operations of the Lakeworth Inlet Commission—docks, transit sheds, railroad spurs and trackage—are located within the corporate limits of the Town of Riviera, which is immediately north of the city of West Palm Beach.

In view of the fact that shipments to Riviera have been refused because "we do not call at Riviera," to quote Northern receiving agents, the Town Council of the Town of Riviera consider it very important that proper acknowledgment be made of the fact that the port is in Riviera.

In further substantiation of the foregoing, it may be stated that West Palm Beach has eliminated commerce from the lakefront within its limits with a view to the beautification of all such lakefront within the corporate limits of the city.

TOWN OF RIVIERA.

S. W. YOUNG, Deputy Clerk

P. O. Box 3314, West Palm Beach.

## Quarterly or Semi-Annual Payment of Taxes.

The State Chamber of Commerce of Florida in a statement about quarterly and semi-annual payment of taxes says:

"We are investigating the subject of the quarterly and semi-annual payment of taxes, one in which large numbers of taxpayers are deeply interested, and wish to make the following preliminary statement:

"So far as we have been able to ascertain, no state or municipality now collects general property taxes quarterly, while a number of states have established the rule of semi-annual payments.

"It is urged against the payment of taxes in installments that the cost of collection will be greatly increased; but it should be borne in mind that the whole people is to be served and the matter of a moderate additional expense is negligible compared with the welfare of home owners.

"No exact information exists as to the additional cost of semi-annual collections, and this fact means the subject is open to the fullest discussion.

"The city of Detroit changed from annual payment to a semi-annual payment plan and found it feasible, but an authority who studied the working of the plan is unwilling to agree to the quarterly payment plan, believing the cost of billing and collecting would be excessive. Semi-annual payment would seem to afford the taxpayer great convenience, while not increasing the collection costs to the undesirable point.

"The following states have semi-annual payment of taxes: Arizona, California, Colorado, District of Columbia, Idaho, Indiana, Iowa, Kansas, Minnesota, Nevada, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Dakota."

## A Proposed Southern Industrial Commission to Europe.

Dallas, Texas, December 10.

*Editor Manufacturers Record:*

While the South has made enormous strides in the past two decades, and this progress will continue probably in even a greater ratio in future, in one particular domain it has not fully come into its own. That is in the development of its gateways to foreign commerce. The full significance of this fact can best be demonstrated by a concrete instance. From the port of New York the exports to Europe in 1925 were \$872,000,000, while the imports to that port from Europe for the same year were \$851,000,000, about evenly balanced. From the Galveston district, including Houston and other ports, the exports for 1925 were \$718,000,000 to Europe, while the imports from Europe were only \$39,000,000. This means that we ship our cotton, grain and other products to European ports and these steamers return for the most part empty or in ballast. The comparison holds good as to other Southern ports.

The North Atlantic ports have so long enjoyed a monopoly of the European import trade that they will no doubt maintain that supremacy for years to come unless some concerted action is taken to demonstrate to the countries of Europe the advantages of shipping direct to Southern ports the products consumed in the Southern States.

At one time the South was not in position to finance this business, but in recent years all that has been changed and there is abundant capital available for financing any amount of business through Southern ports.

The solution of the problem is to disseminate the facts throughout the European countries and demonstrate to those interested that there is no need of an intermediary in the relations between them and ourselves. This can be done effectively in but one way—personal contact.

The trans-Atlantic companies say the demand for passenger accommodations the past summer broke all records. There are thousands of representative business and professional men from the Southern States making the trip for pleasure or on business, so it would add little, if anything, to the expense if a group of these men made the trip together with an official status that would make it possible to come in contact with the officials and industrial leaders abroad, thus affording an opportunity to accomplish a purpose that could not be accomplished by the same group traveling as individuals. Undoubtedly such a body, to be known as the Southern Industrial Commission to Europe, would meet with the most cordial welcome by the representative interests abroad, since they have the same incentive to further direct relations that we have, especially at this time when they are looking for new markets and trying to reduce the cost of marketing and transportation. And this can be accomplished through these direct relations.

Through our diplomatic and consular representatives it is probable that this official commission would be received by the executive heads of the eight countries to be visited, as well as by the officials in the sixteen cities and industrial centers where stops would be made.

The publicity, both in the United States and abroad, to be derived from such propaganda would alone be worth the cost of the effort. And certainly it would not be possible to visit Europe under more delightful conditions than as a member of this Southern Commission.

H. D. MARTIN.



## Georgia Association Elects Officers—Planning to Raise \$100,000 for Publicity and Development Work.

Atlanta, Ga., December 11—[Special.]—Georgia's agricultural, industrial and civic development was given marked impetus this week when at the annual election of officers of the Georgia Association the active direction of the affairs of that organization was placed in the hands of men who are among the leading business directors in this State. H. G. Hastings, nationally known seedsman and an authority particularly on Southern agricultural problems, was elected president, succeeding Hon. John R. Slater of Douglas, Ga., chief executive of the Association during the last year.

H. M. Atkinson, chairman of the board of directors of the Georgia Railway and Power Company and of the recently merged Southeastern power interests under the corporate title of the Southeastern Power Company, was made chairman of an "advisory committee," the chief function of which will be to counsel with the executive officers on ways and means of financing and prosecuting the constructive work of the organization. Other members of this committee, each an outstanding business man of Georgia, are: J. E. Skaggs, president of the Southeastern Express Company; Ben S. Read, president of the Southern Bell Telephone Company; Col. B. L. Bugg, president of the Atlanta, Birmingham and Atlantic Railway Company; J. E. Conwell, president of the Georgia Cotton Growers' Co-operative Association; J. K. Orr, Atlanta, president of the J. K. Orr Shoe Company, and H. H. Tift, Tifton, one of the outstanding business men and financiers of south Georgia. This committee may be added to from time to time at the discretion of the president.

In addition to the election of Mr. Hastings to the presidency of the Association, Henderson Hallman, Atlanta civic leader and particularly prominent in local Chamber of Commerce activities, was elected to vice-presidency as former Vice-President Hastings' successor, and J. M. Patterson, Putney, Ga., the most extensive pecan-nut grower in Georgia, also was elected a vice-president. Other vice-presidents, re-elected are W. C. Stokes, prominent in middle Georgia development activities; P. R. Bomeisler, former south Georgia electric power and light executive; R. L. McKenney, editor and president of the Macon News, and J. E. Turner, Fitzgerald, Ga., banker. Each of the past presidents of the organization was, by resolution, made an honorary vice-president. They are A. K. Sessoms, C. K. C. Ausley, M. Hugh Westberry and John R. Slater, each an outstanding business man and development enthusiast in his community. Also Mrs. Betts of Ashburn, Turner county, widow of the late President George T. Betts, who died in the service of the Georgia Association, was elected to an honorary vice-presidency.

The secretary of the Association, who was its chief founder and who has been its main guiding genius since its founding, is F. H. Abbott, former acting commissioner of Indian affairs in the Federal Department of the Interior, who shortly will be re-elected by the Association's executive committee, consisting of the president, ex officio; W. B. Fleming, Bainbridge, and W. D. O'Quinn, Waycross, Ga.

President Hastings delivered a notable "inaugural" address, which may be epitomized in the following terse statements of the aims and objects of the Georgia Association as he presented them: First, the maintenance of as nearly as possible an even balance between rural and industrial development of Georgia; second, to bring Georgia to a full and practical diversification system of farming, thus to produce at home the farm-produced commodities—food and feed stuffs chiefly—for which \$100,000,000 annually flows from Georgia into

other States; third, to destroy the system of farm tenantry by aiding tenant farmers to own their own farms, two-thirds of the farmers of Georgia now being of the tenant class; fourth, to attract and locate on now idle farm lands a desirable class of new settlers in Georgia.

It was a noteworthy and significant meeting and augurs well for the future and effectiveness of its work for State-wide development and nation-wide publicity. A movement has been started the purpose of which is to raise a fund for \$100,000 to finance the activities of the organization during the year 1927.

## A House Organ of Real Service.

The Dynamo, published by the J. C. Penney Company for the use of its employees in its 750 stores, is an unusual house organ. Its chief value lies in the helpful character of its reading matter. Being entirely free of advertisements and without subscribers, as all house organs should be, The Dynamo concentrates its power on effective inspiration toward greater service to the benefit of the entire Penney business family. The J. C. Penney Company undertakes to do business strictly in accord with the Golden Rule. The Dynamo thus interprets the Golden Rule, as applied specifically to Penney stores: "Serve as you would be served."

The application of the Golden Rule to the Penney method of merchandising was started in the mother store by James C. Penney in Kemmerer, Wyo., in 1902, and has been the outstanding principle of doing business in the Penney organization ever since.

It takes only a few lines to interpret the Golden Rule. Most of the space in The Dynamo is occupied by articles written by Penney managers describing specific selling experiences in which not only is the Golden Rule illustrated, but effective selling tactics as well.

A list of captions of the articles appearing in the October issue will illustrate the idea:

"My Idea of Best Service to the Public."

"Keeping on the Job to Put It Over."

"Know Your Community."

"Listen to What the Customer Has to Say."

"What Do You See Coming Through the Door?"

and eight more of the same general nature. To go a little further, take the following from "Know Your Community":

"A customer made a very cutting remark to me once when we had only 297 stores. He was a large man. I was trying to instill into him some of the J. C. Penney Company enthusiasm with which I was bubbling over. I told him all about our wonderful organization of 297 busy stores. And I thought I was making a 'home run with the bases full' until he asked me for size 50 underwear, size 48 dress pants and size 19 dress shirt. To each of these requests I replied that I was extremely sorry; that we were just out of the particular size; that we expected another shipment very shortly. It seems that he was still impressed with my telling him of our organization of 297 busy stores. He said: 'If they are all like this one, you better put them all together and have one regular store.'"

"It was not the customer's fault that we were unable to fit him. He took me at my word when I told him about our wonderful organization. It just showed me that I was lax in not studying my community and its people. Needless to say, that incident set me to thinking."

In addition to the articles on salesmanship are a few dealing with the construction or the care of articles sold by Penney stores. "The Welt Shoe—How It Is Made," is one of these; "Washability of Gloves" is another. The general tenor of the latter may be surmised from the first two paragraphs, which run as follows:

"A knowledge of glove-cleaning methods will help you to prevent many disappointed and dissatisfied customers. It is

a subject that should be fully understood, because it is one that must be discussed with a customer with authority, and with some caution as well."

Other articles of this educational type are: "Cotton and Its Uses" and "Horse Leather for Our Coats and Vests."

Thus The Dynamo generates and sends throughout the Penney organization a current of sales power by which it justifies its name.

### Bids Invited on 12-Story Building.

Beaumont, Texas.—Construction bids will be received until December 28 by the American National Bank of this city for the erection of a fireproof bank and office building at Orleans and Bowie streets. The structure will be 12 stories, 100 by 75 feet, of brick, stone, reinforced concrete and steel. Alternate bids will be accepted on a 10-story structure. J. Ruskin Bailey of Houston is the architect, with Tisdale, Stone & Pinson of Nashville, Tenn., associate architects, and H. M. Sanford of Houston, structural engineer. Ed Stedman is chairman of the building committee.

### Virginia Polytechnic Institute's \$350,000 War Memorial and Stadium.

Completed at a cost of approximately \$350,000, Virginia Polytechnic Institute of Blacksburg, Va., has recently dedicated a new war memorial hall and stadium to the memory of a number of Virginia Polytechnic Institute boys who were killed in the World War. The structures are also in honor of a large percentage of the entire enrollment who entered the service from the institution. The hall is three stories, with six-story tower, modified Gothic architecture, 240 by 100 feet, of stone, steel and concrete, with a stone and concrete foundation, concrete and wood floors and slag roof. It was designed by Cram & Ferguson of Boston, Mass., and Carneal & Johnston of Richmond, Va. J. L. Crouse of Greensboro, N. C., is the general contractor.

When all units of the stadium are complete it will afford seating accommodations for 12,000. At present concrete bleachers have been erected only on one side of the oval, and it is understood that completion will await additional funds. The stadium covers two acres and is surrounded by a quarter-mile track, with a 200-yard straightaway on one side.

### The Winter Season at Miami.

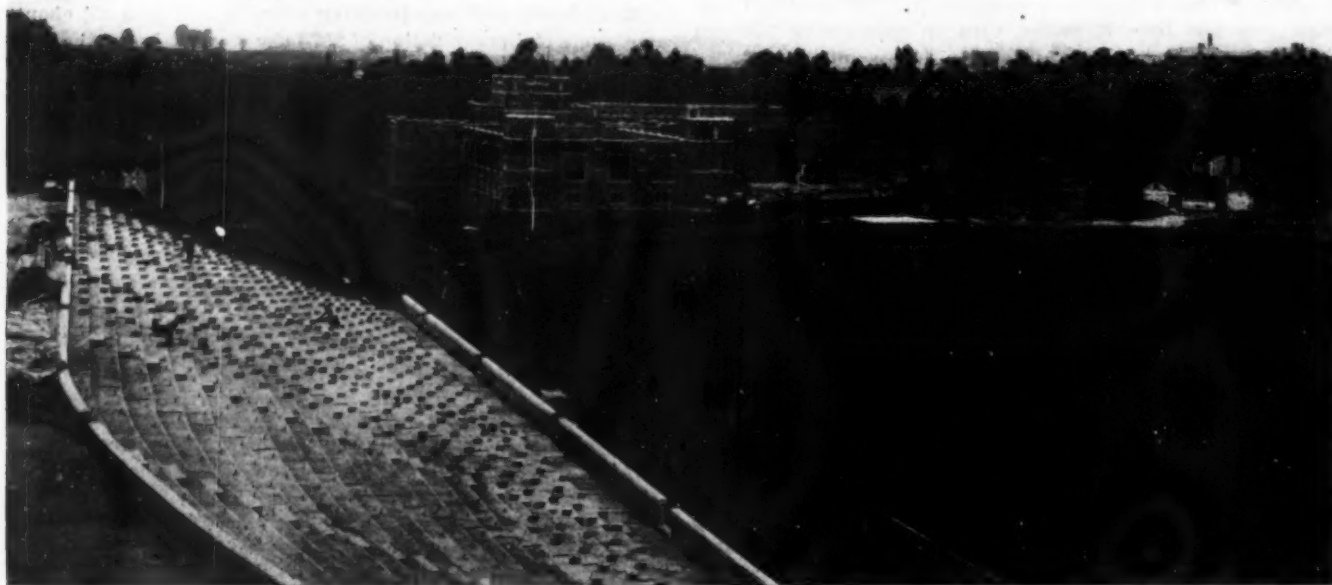
The Miami Chamber of Commerce, Lon Worth Crow, president, Miami, Fla., has issued a handsomely colored and illustrated pamphlet in which it is stated that Miami conditions are normal now and that the comeback from the effects of the September hurricane has been even faster than Mayor Romfh predicted; attention is directed also to a statement of the National Geographic Society, based on United States Weather Bureau records, declaring that hurricanes never occur in the winter months. The year-round hotels are operating as usual and the Mayor is further quoted as saying that "our friends will find Miami this winter the same enjoyable, hospitable, comfortable vacation city it has always been." All the pictures in the pamphlet are of superior character, the black and whites being, in their way, just as attractive as those that are colored. Another bit of advertising is a folder in colors entitled "Miami in a Coconut; Seven Days in Miami."

### Considering \$3,000,000 Project in Kansas City.

Kansas City, Mo.—Tentative plans have been prepared by Wight & Wight of this city for a building project on McGee street north of 10th street, which may call for the expenditure of \$3,000,000. A company, of which C. C. Peters is president, is considering the erection of a 10-story office building in connection with a four and five story garage and interurban bus terminal at this location, and is making a technical investigation covering details as to the probable financial returns and the possibility of financing the project in a satisfactory manner. It is stated that the proposed garage will accommodate 1000 cars.

### Pinellas County Sells \$200,000 of Bonds.

Clearwater, Fla.—A bond issue of \$200,000 has been sold by the Pinellas County Board of Commissioners, E. H. Beckett, chairman, Tarpon Springs, to the Well, Roth and Irving Company, Cincinnati, Ohio, at \$206,220, proceeds from the sale to be used for buildings and equipment on the county poor farm. The bonds will bear an interest rate of 6 per cent and mature June 1, 1946. E. B. O'Quinn of this city is clerk of the county court.



WAR MEMORIAL HALL AND SECTION OF STADIUM OF VIRGINIA POLYTECHNIC INSTITUTE.



### Some Strong Advantages Claimed for Macon, Ga.

For the purpose of attracting additional cotton mills and other industries to Macon its Chamber of Commerce recently had an industrial survey made of the city. The report of the survey brought out some interesting features of the city's location and advantages.

The report describes Macon as a city of 70,000 population, located within six miles of the exact geographical center of Georgia. It attributes the city's steady growth during the 103 years of its life to its location as trade center of a rich agricultural section extending 50 miles east, north and west and 100 miles south, an area including about 875,000 people. "There is no city of approaching size," says the report, "nor of industrial or large commercial importance nearer than 100 miles. Macon is able, therefore, to draw from this trade zone, without any competition whatever from other centers, its drafts of labor, composed in its entirety of native white stock of the type which pioneered this country and who welcome the opportunity to answer the summons to this city's labor market."

The cost of living in Atlanta, as reported by the National Industrial Conference Board, is 12 per cent below the national average. The report on Macon claims that city's living cost is even lower. This fact, it is said, enables Macon's high-grade labor to live comfortably on a wage that would be inadequate elsewhere. In partial support of this claim the report quotes the census of 1923 on the annual cash textile wage as follows: Alabama, \$597.64; North Carolina, \$676.73; South Carolina, \$651.98, and Georgia, \$590.54. This takes no account of low house rents, coal and food at cost and other advantages the textile workers enjoy.

The efficiency of labor in Macon is greater than elsewhere also, it is stated; witness the census figures, which show that in Alabama the labor cost is 14 per cent of finished products; 16.8 per cent in North Carolina, 16.7 per cent in South Carolina, and only 13.3 per cent in Georgia. And the statement is italicized that "The advantages suggested by these figures on Georgia's relative wage cost and labor efficiency have proved on check to be even more apparent in Macon than herein outlined for the state as a whole."

Although there is no poverty in Macon, says the report, labor is available in quantities that permit a careful selection. This unusual fact is attributed to a large trade area untapped by nearby cities.

The city is found to be prosperous. Within the past 25 years, while the population has doubled, the bank deposits have quadrupled and the savings deposits have sextupled. Home ownership is high and the ratio of automobiles to people is 1 to 8.9.

The city is healthy and healthful. Vigilant county and city health departments maintain constant supervision and check on public health conditions. The city's elevation ranges from 365 to 550 feet. The average temperatures are, year round, 63 degrees; winter low, 46 degrees; high, 57 degrees; summer low, 55 degrees; high, 80 degrees.

Macon and Bibb county grant immunity from taxation to new industries for five years. The total city and county tax rates are \$3.70 per \$100 of assessed valuation, but assessments are from 40 per cent to 50 per cent of actual valuation. This, says the report, sets the actual tax rate at about \$1.63 per \$100.

"Nowhere else in the United States is construction so economical as in Macon," states the report, and it gives current quotations on various building materials as follows: Brick, Macon, \$11 per 1000; North and East, \$18 to \$30 per 1000; other Southeastern cities, \$15 to \$18. The explanation for this fact is that there are two large brick plants in Macon.

Lumber likewise is reported cheaper in Marion than elsewhere, one illustration being the price of No. 1 yellow pine, which is quoted at from \$30 to \$55 in Atlantic Coast states

and in Macon at \$25. "Numbers of sawmills within a radius of 75 miles of Macon find outlets through distributors here for their output," says the report. And it continues:

"Common labor is available in Macon for \$1.50 to \$2 per day, with no scarcity at the first quoted price, and working a 10-hour day; brick masons' wages are based on \$1 to \$1.10 per hour; carpenters, 50 cents to 75 cents per hour; structural iron workers, 68 cents per hour. These figures are those for which unlimited quantity of labor may be secured on short notice or demand, and represent the maximum prices paid."

Referring to power, "There is practically no community in the South which offers a lower power rate than Macon does," states the report. It quotes the following schedule of charges:

"Service charge, \$1.11 per kilowatt-hour of maximum demand per month, based on 30-minute demand, plus energy charge as follows:

"For the first 10,000 kilowatt-hours, per month, 1.55 cents per kilowatt-hour.

"For the next 10,000 kilowatt-hours, per month, 1.44 cents per kilowatt-hour.

"For the next 10,000 kilowatt-hours, per month, 1.22 cents per kilowatt-hour.

"For the next 20,000 kilowatt-hours, per month, 1.00 cents per kilowatt-hour.

"For the next 50,000 kilowatt-hours, per month, 0.88 cents per kilowatt-hour.

"For all over 100,000 kilowatt-hours, per month, 0.777 cents per kilowatt-hour.

"These rates are subject to 10 per cent discount.

"The primary source of this power is in the hydro-electric developments on the Ocmulgee River, although connections are established with every great center of power in the Southeast, including Muscle Shoals. It is constant and plentiful.

"Coal is available from Tennessee and Kentucky mines at from \$4 to \$5 per ton."

### Houston Votes \$1,500,000 for Port.

Houston, Texas.—A bond issue of \$1,500,000 has been voted by the city of Houston, which assures the continued development of port facilities along the Ship Channel. Plans for these improvements contemplate the completion of a railroad right of way to Green's Bayou on the north side of the channel and to Morgan's Point on the south side. This will provide adequate rail facilities for the port terminal railroad, it is said, and will afford sufficient trackage for prospective industries wishing to locate along the channel. It is planned to create another turning basin near the Sinclair refinery, an improvement made possible by the authorization of the bonds. A tract of land has been donated by the Sinclair interests and the Port Commission has acquired Clinton Island, making it possible to construct bulkheads along the old channel, as well as to construct a new turning basin on the upper channel. Additional facilities for the grain elevator will also be provided and two additional wharves constructed.

### For \$600,000 Residence.

Tulsa, Okla.—Plans for the erection of a \$600,000 residence here for Waite Phillips of this city have been prepared by Edward B. Delk of Kansas City, Mo., and general construction contract awarded to the Long Construction Company of Kansas City, according to recent announcement by Mr. Phillips. Details relative to construction have not been made public.

### Will Vote on \$600,000 Drainage Bonds.

Brownsville, Texas.—An election has been called for December 21 by the directors of Cameron county water improvement district No. 6 for the purpose of carrying out an extensive drainage program in the El Jardin water district. Plans for the work have been made by C. P. Williams, assistant chief of the United States Reclamation Service, and dredging contract awarded to Callahan & Robertson of this city.

## THE IRON AND STEEL SITUATION

### Showing in Steel Somewhat Mixed.

Pittsburgh, December 13.—[Special.]—Steel-trade news of the week make a mixed showing, which is not at all unusual for steel. The November steel-ingot production report showed a decrease, but operations have increased in the past week. Fabricated structural steel, relatively dull for three months, made a good showing in the week as to bookings and inquiries. Freight-car business, almost stagnant on an average since early March, showed a large increase in inquiry. Automobile-trade buying of steel increased, while such buying by agricultural-implement works as would be needed to justify recent predictions of greater implement production immediately after January 1, has failed to materialize. Steel-mill prices have held very well, indeed, except for increased shading in sheets, and as the advanced prices from which this shading occurs had never been well established, this does not count for much.

Production of steel ingots in November, as officially reported, was 3,732,119 tons, indicating, on the basis of working days, 9 per cent lower production than in October. If the testimony of recent years is accepted, the seasonal swing should be upward from October to November, but the same testimony shows a seasonal swing down from November to December. Either the seasonal decrease came early or there is an underlying swing of more importance. An upturn in January is normal, but no upturn seems likely such as would bring the mill-operating rate up to that of last January, some 89 per cent.

The average rate of steel production in November was 80 per cent, but late in the month the rate was below 75 per cent. Since then there has been a slight general increase, the Steel Corporation having produced last week at 81 per cent.

The superficial showing of the Steel Corporation's unfilled tonnage reports in the past three months requires interpretation to eliminate the disturbing element of rails. There is clearly shown a decrease in buying in general, but by the incidence during the three months of a great deal of rail buying for 1927 delivery, increases in the total unfilled obligations were shown, 51,174 tons in September, 90,152 tons in October and 123,786 tons in November, or 265,112 tons increase in three months. Rail orders distributed to the Steel Corporation were in the neighborhood of 750,000 tons, while rail shipments in the three months were but a fraction of that tonnage, and thus the large increase in rails offset decreases in other lines. Shipments of all steel decreased about 10 per cent from October to November, helping the later month to show an increase in unfilled obligations.

Fabricated structural-steel lettings reported last week totaled 35,000 tons, or somewhat above the average maintained up to September 1, since when the average has been scarcely more than two-thirds as large, and an unusual amount of inquiry has come out in the past two or three weeks.

The total number of freight cars on order by Class 1 railroads dropped to the remarkably low total of 11,484 cars November 1, when production at 10,000 cars a month is a moderately low pace. Now, however, it is counted up that about 20,000 freight and passenger cars are under inquiry.

Automobile-trade buying of steel has been increasing slowly in the past two or three weeks, but from such a low level that the volume even now is not large. In the long run, however, automobiles and trucks will probably take much the same amount of steel as in the past two years.

With the November decrease in steel-ingot production, the year's total promises to run 6 to 7 per cent above that of last

year, when up to October 1 this year was running 10 per cent above last year. Lake Superior iron-ore shipments for the year are about 60,000,000 tons, or 8 per cent increase, and pig-iron production, estimated at 39,500,000 tons for the year, also shows 8 per cent increase.

### Quiet Iron Market Not Disturbing to Birmingham District.

Birmingham, Ala., December 13.—[Special.]—The small amount of iron being sold has not disturbed the market in this section any. Very little iron has been sold for delivery during the first three months of the year, but the melt is steady and the year will close with a small tonnage on yards of the larger consumers and the surplus stock on furnace yards well reduced. The quotation base is holding very firmly, \$20 per ton, No. 2 foundry. Delivery continues at an active pace, the total being in excess of the make. The sales for a day or two last week were equal to the production, so far as foundry iron was concerned, but the week's average was a little under the output.

Production of pig-iron in Alabama for the first 11 months of the year is estimated at 2,680,889 tons, and though one blast furnace is out since the start of the month, No. 6 furnace of the Ensley group of the Tennessee Coal, Iron and Railroad Company, the annual aggregate is expected to be around 2,938,889 tons, as compared to 2,815,688 tons of 1925. The record production in Alabama was in 1917, when 2,953,705 tons were produced. As is known, upward of 90 per cent of the pig-iron manufactured in this State is melted in this territory. The greater portion of the make is basic iron. There are 10 blast furnaces on foundry iron now and 11 on basic, with one on special. The furnaces producing basic iron, with one or two exceptions, have large capacities and their steady operation means much iron. The need for basic iron is considerably greater now, with a larger amount of ingots and billets being produced, the three large open-hearth furnaces at the Fairfield steel mill being in the production list. A fourth open-hearth furnace will be in operation by the end of the month. The increased demand for basic iron will be met by the two very large, new blast furnaces being erected at Fairfield, these to have a daily capacity of 600 tons of iron each.

First announcement of cessation of operations at one of the larger melting industries of the district for the holidays comes from the American Cast Iron Pipe Company; the shop will close down the day before Christmas for a week. This plant carries out the "Golden Rule," there being a co-operative arrangement in the operations of the plant, the workmen sharing in the profits, so to speak, of the concern. There will be distributed with the regular pay on December 24 the usual bonus paid to all who have lost no time during the year, working every day the plant has been in operation, jury service and machinery trouble being excused. A turkey is also presented to employees where time is put in through the year. The American Cast Iron Pipe Company during the year provides a gift of \$100 to all men who finish their apprenticeship. The employees have a committee on the management board.

One or two other large iron-consuming companies are announcing their lay-off for the holiday period; present indications are that there will be less time lost than was thought likely two weeks ago. There is still a slow market for cast-iron pipe, both soil and pressure. Quotations, which have



been weak for some time, are unchanged, though the higher range is hardly given. Foundries and machine shops are also noting a lagging market. One or two interests report activity, but these buy only in small lots and hardly make up the losses in other directions. The stove foundries, for instance, have had quite an active season and have melted much iron.

The cast-iron pressure pipe trade is slowing down and prices are weak and show a material decline, \$36 to \$37 being asked on six-inch and over pipe. Unfilled tonnage, however, with several of the larger shops is sufficient to warrant steady operation for some time to come. The lower price is likely to bring on considerable buying, even before the close of the year, several specifications being in sight.

The steel mart is good yet. Structural steel works are without all the work they can do, but are turning out many specifications. One of the sights of Birmingham proper is a large commercial structure going up with local names on each piece of steel being erected. The steel, having been manufactured in the district, is brought from the fabricating works on large trucks, with no railroad transportation whatever. The Ensley mill on rail and mills in Fairfield on railroad accessories and other shapes are all going to capacity.

Coal mining continues at maximum and transportation companies are giving good service, the railroad car shortage complaint not being very extensive. Production has eased off a little, the weekly production figure going up to 436,000 tons and still holding above 415,000 to 420,000 tons. Export business is still felt and domestic orders from outside of the territory are being filled.

The coke market is also still strong and will warrant active operation of by-product coke works for a long time to come. The Sloss-Sheffield Steel and Iron Company will make betterments at its North Birmingham by-product plant, 120 ovens, which will materially increase the output of coke there. Representatives of the Semet-Solvay Company, builders of the plant, are now at work on the plans, and expectations are that within a few months the output here will be increased and requirements of the company better met. What is being spent on this development is not stated, but the understanding is that it will eliminate the need of erecting additional ovens which might have cost \$2,000,000. The Sloss-Sheffield Company is pushing the work on a new blast furnace, to be ready next March or April. The output will be around 400 tons daily. The No. 3 furnace at North Birmingham, being relined and repaired, is almost ready for the torch, but will be held off until one of the city furnaces goes out. Four furnaces are making foundry iron with Sloss-Sheffield.

The scrap iron and steel market is unchanged, with much old material moving, very few sales made and prices low and weak. Heavy melting steel is still the most prominent product and the larger consumers are asking steady delivery by dealers. This necessitates steady work on the yards.

Quotations in the Birmingham district for pig-iron and iron and steel scrap follow:

#### PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$20.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$20.50; iron of 2.75 to 3.25 per cent silicon, \$21.00; iron of 3.25 to 3.75 per cent silicon, \$21.50; iron of 3.75 to 4.25 per cent silicon, \$22.00; charcoal iron, f. o. b. furnaces, \$29.00 to \$30.00.

#### OLD MATERIAL.

Old steel axles .....	\$16.00 to \$17.00
Old iron axles .....	16.00 to 17.00
Old steel rails .....	12.50 to 13.50
Heavy melting steel .....	13.00 to 13.50
No. 1 cast .....	16.00 to 17.00
Stove plate .....	14.00 to 15.00
No. 1 railroad wrought .....	11.00 to 12.00
Old car wheels .....	15.00 to 16.00
Old tramcar wheels .....	16.00 to 17.00
Machine shop turnings .....	8.00 to 8.50
Cast-iron borings .....	8.00 to 8.50
Cast-iron borings (chem.) .....	15.50 to 16.50

## RAILROADS

### EARNINGS OF RAILROADS IN 10 MONTHS. Southern District Shows Highest Rate of Return on Investment.

The Bureau of Railway Economics, Transportation Building, Washington, D. C., reports that Class 1 railroads for the first 10 months in 1926 had a net railway operating income amounting to \$1,035,475,630, which was at the annual rate of return of 5.25 per cent on their property investment. During the corresponding period last year their net railway operating income amounted to \$936,960,604, or 4.86 per cent on their property investment.

Gross operating revenues for the first 10 months in 1926 amounted to \$5,363,140,570, compared with \$5,131,597,622 during the corresponding period last year, or an increase of 4.5 per cent. Operating expenses for the first 10-month period this year totaled \$3,907,340,652, compared with \$3,810,054,428 during the corresponding period last year, or an increase of 2.6 per cent.

The net railway operating income of the Class 1 railroads in October totaled \$146,099,828, which for that month was at the annual rate of return of 5.45 per cent on their property investment, according to reports just filed by the carriers with the Bureau. In October last year their net railway operating income was \$137,999,971, or 5.26 per cent on their property investment.

This compilation as to earnings in October is based on reports from 185 Class 1 railroads, representing a total mileage of 237,173 miles.

Gross operating revenues for the month amounted to \$608,798,659, compared with \$591,268,471 in October last year, or an increase of 3 per cent. Operating expenses in October this year totaled \$414,708,774, compared with \$410,240,992 in the same month last year, or an increase of 1.1 per cent.

Class 1 railroads in October paid \$37,359,166 in taxes, an increase of \$3,452,084, or 10 per cent over the same month in 1925. This brought the total tax bill of the Class 1 railroads for the first 10 months this year to \$329,379,169, an increase of \$29,643,944, or 10 per cent above the corresponding period last year.

Net railway operating income reported by districts for the first 10 months of 1926 shows that the Southern district had the highest percentage of return, based on property investment—viz., 5.76 per cent. The next highest was the Eastern district, with 5.74 per cent, and the lowest was the Western district, 4.57 per cent.

### What Shippers Have Done to Solve Traffic Problems.

The dominant factor in the ability of the railroads to handle the greatest traffic during the past year that they have ever handled in their history was the co-operation of the Regional Shippers Advisory boards, according to W. J. L. Banham, general traffic manager of the Otis Elevator Company and also general chairman of the Atlantic States Shippers Advisory Board, in an address last week before the Baltimore Traffic Club. While it would be impossible to measure the money value of such co-operation accurately, Mr. Banham estimated that it would run into many millions of dollars.

Mr. Banham emphasized a part of Secretary of Commerce Hoover's annual report as follows: "These boards are representative of all the shippers and receivers in each territory—farmers, manufacturers and distributors. Transportation

needs have been analyzed and anticipated quarterly; car requirements are regularly estimated. The boards have also made studies of markets and marketing methods and the promotion of more even distribution of commodities; they have contributed to the solution of railway problems of better loading and higher operating efficiency. \* \* \*

"There are now 13 Regional Advisory boards, covering practically every State," Mr. Banham said. "Each board's jurisdiction, usually including from three to six States, is made, as a practical matter, to coincide with the territory of the several district managers of the Car Service Division of the American Railway Association. The whole purpose of these voluntary organizations of shippers is to provide a method by which the buyers and sellers of transportation can sit down and adjust informally transportation difficulties. The Board functions in all matters which come within the purview of the Car Service Division of the American Railway Association in its particular territory. It is a service organization, and there are no restrictions as to what may be considered by the board or its committees if they come within these limitations. We do not deal with rates. \* \* \*

"In the realm of business forecast the work of the boards is unique. The Atlantic States Shippers Advisory Board, for example—whose jurisdiction covers your State—has 52 commodity committees, representing every industry in our territory. These committees survey as accurately as possible business activity in their own industry and from these analyses we present to the railroads information about future car requirements. If we can predict future transportation needs in the Atlantic States for only 60 days, we will have gone a long way toward eliminating conditions which make for freight congestion. \* \* \*

"After all, the railroads' problem is the shippers. The politicians have tried for years to solve it, but have failed. If all the shippers support the railroads consistently in their endeavor to bring their system to top efficiency, we will speedily eliminate those conditions which go to make up a transportation problem."

### Interstate Commerce Commission Would Modify Transportation Law.

In its annual report submitted to Congress last week the Interstate Commerce Commission asked that it be given more power to control proposed railroad consolidations, but it also asked that there be removed from the present law that section which requires the Commission to prepare a general plan to merge all the railroads of the country into about 20 systems. The report also recommended that the method of determining the valuation of the railroad properties be modified so that valuation work will be expedited. Furthermore, Congress was asked to pass an Act requiring railroads to use steel or steel underframe passenger cars and to prohibit the use of wooden cars in the same trains with steel cars.

### Big Figures of the Freight Movement.

Loading of revenue freight on the railroads during the week ended November 27 totaled 942,792 cars, says the Car Service Division of the American Railway Association. This was an increase of 19,586 cars over the corresponding week last year and 63,661 cars over the same week in 1924, but due to seasonal decline in traffic and also to the observance of Thanksgiving Day the total for the week of November 27 was a decrease of 136,020 cars under the next preceding week. Since January 1 last there have been loaded with revenue freight a total of 49,529,613 cars, which compares with 47,523,818 cars similarly loaded in the corresponding period of last year and with 45,059,546 cars in the same period of 1924.

## SEABOARD'S RECORD-BREAKING WORK IN FLORIDA.

### Over 200 Miles of New Extensions Built This Year to Be Opened in January.

The first through train service over the Seaboard Air Line Railway's Miami extension, serving the east coast of Florida, and also over the Fort Myers-Naples extension on the west coast of the State, both designated as the "All-Florida Route," will be distinguished on January 7 and 8 by the operation of special trains carrying a large party of invited guests of the company to Fort Ogden, Fort Myers, Naples, West Palm Beach and Palm Beach and Miami.

Guests will travel on the Orange Blossom Special, leaving the Pennsylvania Station in New York at 6.25 P. M. Wednesday, January 5, via the Pennsylvania Railroad, the Seaboard Air Line Railway and the Seaboard's cross-Florida short line. A second section of this train will leave Broad Street Station, Philadelphia, at 8.40 P. M. on the same day, and a third section will leave Jacksonville, Fla., at 8.30 P. M. on Thursday, January 6, serving St. Petersburg, Tampa, Venice, Sarasota, Plant City, Tallahassee and intermediate points, all of the sections meeting at Arcadia, Fla., and leaving there at 8 A. M. January 7, beginning the trip over the new extensions and going first via Fort Ogden to Fort Myers, reaching the latter at 10.25 A. M. for an hour's stop, and Naples will be reached at 1.25 P. M. for luncheon at the Naples Hotel. There the afternoon will be spent, and at 5 P. M. the party will go back to Fort Myers, arriving there at 7 P. M. to attend a banquet given by the Fort Myers Chamber of Commerce at the Royal Palm Hotel, and at 9 P. M. the guests will leave for the trip on the East Coast, arriving at West Palm Beach at 7.10 A. M. January 8.

From West Palm Beach to Miami short stops will be made at Lake Worth, Boynton, Delray, Deerfield, Pompano, Fort Lauderdale, Hollywood, Opa-Locka and Hialeah, the party reaching Miami at 2.15 P. M., after luncheon on the trains, and the Miami Chamber of Commerce and other citizens will hold a reception in the Royal Palm Park, with ceremonies incident to the opening of the line.

The trains will be parked at Miami for the use of the party from Saturday evening, January 8, until Monday evening, January 10, the party leaving Miami at 6 P. M. on their return home, arriving on January 12 at Washington, 4.45 A. M.; Baltimore, 5.55 A. M.; Wilmington, Del., 7.30 A. M.; West Philadelphia, 8.09 A. M., and New York, 10.20 A. M. Sleepers for Washington and Baltimore, respectively, will be cut off at those cities, to be occupied until 7.30 A. M. Guests leaving Miami on the same trains for west coast of Florida points will reach home on the morning of January 11.

President S. Davies Warfield of the Seaboard system, who will be host to the party, has made another record of rapid construction by building these extensions to put alongside of that made in building the Coleman and Palm Beach extension, less than two years ago. In each instance the total mileage of new work was about the same, that which was just opened being 206½ miles and that of the Palm Beach extension 204 miles, work following the opening of the latter to complete the cross-State route, making its final total 238 miles, so that the Seaboard has built, including the present construction, for both coasts a total of 440 miles of pioneer railroad building in Florida, reducing train-time crossing the State by 15 hours, connecting up the Seaboard's main lines on both coasts and making the Seaboard short line to and from the north via the Gross-Callahan-Baldwin cut-off through the central part of Florida to the east coast of the State without interchange south of Richmond.

It is claimed that the rapid completion of this aggregate of railroad mileage in Florida is unparalleled in the railroad



history of the country. Under the caption, "Epoch-Making Record, Seaboard Extensions on Both Florida Coasts," appears the following data: First shovelful of earth removed starting construction (both coasts) January 20, 1926. Total mileage new construction both coasts, 206.62 miles. Miami extension (east coast) opened for freight traffic to Delray, 25 miles, November 10, 1926. Fort Ogden-Fort Myers extension (west coast) opened for freight traffic same date. Miami extension (east coast) through freight traffic opened to Miami, December 15, 1926. Weight of rail Miami extension, 100 pounds per yard. Average percentage of main line tangents on both coasts, 95½ per cent. Approximate average maximum curvature, both coasts, 2 degrees. Approximate maximum grade, both coasts, three-tenths of 1 per cent.

"On both coasts of Florida," says the announcement of the opening, "within 10 to 11 months this construction was opened for business—an unprecedented achievement. Made possible by the Seaboard's efficient staff of designing and construction engineers; Foley Bros., Inc., contractors on both coasts."

### New Equipment, Rails, Etc.

Equipment inquiries reported include the following: Baltimore and Ohio Railroad, 2000 steel box cars of 50 tons capacity and 1000 hopper cars of 70 tons capacity; Santa Fe system, 1500 box cars, 300 gondola cars, 150 sulphur-carrying cars, 20 chair cars, 10 baggage cars, 10 postal cars, 5 combination mail and baggage cars, 4 buffet-library cars, 3 parlor cars, 2 combination passenger, baggage and smoking cars, 2 dining cars and 2 business cars; Cushing Refining and Gasoline Company, Cushing, Okla., 25 tank cars of 8000 gallons capacity; Norfolk and Western, 3 dining cars of all-steel construction; Gulf, Mobile and Northern, 2 passenger cars.

Norfolk Southern Railroad has ordered three consolidation locomotives from the Baldwin Locomotive Works, and from the same builders the St. Louis and O'Fallon Railroad has ordered a Prairie-type locomotive and the Hampton and Branchville Railroad has ordered a 4-6-0-type locomotive.

Baltimore and Ohio Railroad has ordered 80,000 tons of rails, which are distributed among the Carnegie, the Illinois and the Inland steel companies.

Louisville and Nashville Railroad has ordered 1250 tons of bridge steel from the McClintic-Marshall Steel Company. The Pennsylvania Railroad has also ordered from the same plant 700 tons of steel for signal bridges.

The Georgia Railroad, at its shops in Augusta, has completed construction of a combination mail and baggage car which the postal authorities have approved as meeting all requirements of the Postoffice Department. The car is of steel underframe construction.

### Southern Pacific Bids for a Short Line.

Fredericksburg, Texas, December 11—[Special.]—After an inspection trip on the Fredericksburg and Northern Railroad by W. R. Scott, president of the Texas and Louisiana lines of the Southern Pacific Railway system, an offer to purchase the short line was made. It is stated that favorable consideration has been given by the directors and stockholders of the Fredericksburg and Northern and that the pending transaction will be consummated as soon as the permission of the Interstate Commerce Commission is obtained. The road connects with the Kerrville division of the San Antonio and Aransas Pass Railway at Fredericksburg Junction, near Comfort, and runs to Fredericksburg, 25 miles. It is tentatively planned by the Southern Pacific to extend the line northwest from Fredericksburg to San Angelo, about 125 miles, if the deal is closed.

## TEXTILE

### Will Build Addition to Bleachery.

Salisbury, N. C.—Contract is expected to be awarded within a few weeks by the North Carolina Finishing Company of this city for the erection of an addition to its bleachery. Plans for the addition have already been distributed among contractors. J. E. Sirrine & Co., Greenville, S. C., are the engineers.

### To Build Weave Shed.

Lumberton, S. C.—The Jennings Cotton Mills, Inc., will receive bids in about two weeks for the construction of a weave shed here to house approximately 200 looms. J. E. Sirrine & Co., Greenville, S. C., are engineers for the improvements. The Jennings mill is at present equipped with 16,900 spindles for the production of colored hosiery and underwear yarns.

### Philadelphia Firm Building Plant in Georgia.

The Unique Knitting Company of Philadelphia, Pa., advises the MANUFACTURERS RECORD that it is erecting a mill at Acworth, Ga., to be equipped with machinery for the production of sport hose; it is expected to be ready for operation by March 1. The mill building will be two stories, 165 by 65 feet. James Spragens of Acworth is the general contractor and is handling all details.

### Contracts for Cellulose Plant.

Cumberland, Md.—Contract has been awarded by the American Cellulose and Chemical Company, Ltd., to George Hazelwood for an extension to its dye plant at Amcelle, near Cumberland, and to the Cumberland Contracting Company for necessary work outside the buildings. The company also plans to extend water lines and install sprinkler systems in practically all its buildings. An increased production of cellanese yarns and fabrics is contemplated.

### Contract for Gardiner and Warring Plant.

Florence, Ala.—As reported in the MANUFACTURERS RECORD last week, contract for building the proposed underwear plant here for the Gardiner and Warring Company of Amsterdam, N. Y., has been awarded to T. C. Thompson & Bros. of Charlotte, N. C., and construction is expected to begin at once. The main building will be three stories, 250 by 60 feet, and dye and bleach house, 100 by 36 feet. Robert & Co., Inc., Atlanta, are the engineers.

### Halifax Mills Plan \$1,000,000 Industry.

South Boston, Va.—Plans are being made by the Halifax Cotton Mills, Inc., for extensions to its plant here, which will eventually make it a \$1,000,000 industry. These plans have been made possible by an agreement between the City Council of South Boston and the company, by the terms of which the city makes certain concessions as to location of the proposed extensions, which will include a bleachery. An immediate expenditure of \$300,000 will be made and additional expenditures as the demand justifies. Work is expected to begin about the first of the coming year and hurried to completion.

The present plant operates 12,000 spindles and 300 looms for the production of damask.

Hamon & Co., Corpus Christi, Texas, are reported as architects for a \$250,000 cotton mill to be erected at Harlingen, Texas.

## GOOD ROADS AND STREETS

### To Start on \$3,000,000 Paving Program.

Greenville, S. C.—Following a conference between the Greenville county delegation and Ben Sawyer, State Highway Commissioner, Senator J. M. Richardson announces that Greenville county early in January will sell road bonds in the amount of \$1,000,000 to begin a proposed road-construction program which will involve an ultimate outlay of \$3,000,000. This program will be financed by bonds floated against the county's reimbursement from the State Highway Commission under the "pay-as-you-go" plan, a reimbursement agreement for the January issue having been tentatively framed. Initial plans contemplate paving eight miles of the Buncombe road, for which contract will be awarded January 8.

### Texas Invites Bids on 130 Miles to Cost Around \$1,000,000.

Austin, Texas.—Bids will be received until December 20 by the State Highway Commission for road work embracing approximately 130 miles, to cost about \$1,000,000. Construction will involve seven projects, covering a total of 67.48 miles of grading and drainage; three projects, embracing a total of 33.5 miles of grading, drainage and rock-asphalt surfacing; and one project, covering 15.35 miles of concrete. Maintenance work will include 5.4 miles of grading, drainage and surfacing; 7.6 miles of gravel surfacing, and a 44-foot concrete bridge.

### \$750,000 Overseas Road Bonds Sold.

Key West, Fla.—Additional bonds in the amount of \$750,000 have been sold to Marx & Co., Birmingham, by the Monroe County Commissioners for the continuation of work on the overseas highway from Key West to the Florida mainland. The purchase price was 95, the bonds to bear an interest rate of 5½ per cent. This issue is a part of a total of \$2,650,000 authorized and leaves a balance of \$840,000 to be sold. It is estimated that the road is 70 per cent complete.

### 28 Miles in Louisiana.

Mandeville, La.—A contract has been awarded to the Pickard Construction Company, New Orleans, for building 28.3 miles of road in road district No. 4 and sub-road district No. 1 of road district No. 3 in St. Tammany parish. The work will cost approximately \$165,000. Plans and specifications were prepared by J. M. Fourmy, engineer, Hammond, La.

### Philadelphia Firm Furnishes Turning Machinery.

Turning machinery for the Atchafalaya River bridge, described some weeks ago in the MANUFACTURERS RECORD, and which will be completed in the near future, will be furnished to the Virginia Bridge and Iron Company by the Earle Gear and Machine Company, Philadelphia, Pa. In the original item it was incorrectly stated that A. M. Lockett & Co., New Orleans, would furnish this machinery.

### Mississippi County Asks Bids on 10 Miles.

Grenada, Miss.—Bids will be received until January 4 by the Granada County Board of Supervisors, Grenada, for building 10 miles of gravel road, embraced in Federal-aid project No. 147 and located between Grenada and Calhoun City. Plans and specifications may be obtained from the office of the State Highway Engineer at Jackson.

### Kentucky Invites Bids on 200 Miles.

Frankfort, Ky.—Plans for inaugurating its 1927 road-building program have been made by the Kentucky State Highway Commission, which will open bids in January and February for approximately 200 miles of road work. On January 7 proposals will be opened for 117.5 miles of construction, to include a total of 70.8 miles of grade and drainage; 24.7 miles of grading, draining and surfacing; 17.5 miles of surfacing, and 4.5 miles of shoulders. Contract for this work is expected to be awarded January 11.

Estimates will be opened on February 18 and considered February 22 for a total of 30.35 miles of grade and drainage work, 28.5 miles of surfacing and 22.6 miles of grading, drainage and surfacing. E. N. Todd is the State highway engineer.

### Florida Roads to Cost Over \$1,500,000.

Tallahassee, Fla.—Contracts have been awarded by the State Road Department for the construction of 12 road projects, embracing a total of more than 100 miles, to cost in excess of \$1,500,000. Two projects, embracing a total of 26.47 miles of sheet asphalt, bituminous concrete or bituminous macadam, will cost about \$700,000; six projects, covering a total of 59.28 miles of clearing, grubbing and grading, will cost approximately \$490,000. The lowest bids for three projects, covering a total of 23.54 miles of limerock base, aggregated \$340,504, and for one project, covering 3.56 miles of concrete, the low bid was \$115,553.

### Texas Asks Road and Bridge Bids.

Austin, Texas.—Proposals addressed to A. C. Love, state highway engineer, will be received until December 20 for the construction of three road projects and one bridge project, the former to cover a total of approximately 31 miles, while the latter calls for the construction of a concrete bridge on state highway No. 1 in Reeves county. Road work will consist of grading, drainage and surfacing, two projects of approximately 2.5 and 11 miles, respectively, being located in Brooks county and one project of 17.5 miles in Lubbock county.

### Plans for Furey's Ferry Bridge.

Augusta, Ga.—At a recent conference of representatives of the highway departments of Georgia and South Carolina, with representatives of Richmond county, Georgia, and McCormick county, South Carolina, plans were formulated for the construction of the proposed toll bridge over the Savannah River at Furey's Ferry. The structure, which will be built and operated as a joint project by the two States, is estimated to cost \$250,000. It will be located on the Greenville-Augusta highway, commonly known as highway No. 20. McCormick county will sell bonds to pay its share of the cost.

### Notes on Good Roads Construction.

Construction is proceeding rapidly on six new roads now being built in Martin county, Florida, at a cost of \$400,000; E. H. Gibson is county engineer.

The Highway Construction Company of Miami, Fla., and Cleveland, Ohio, has practically completed a \$2,000,000 paving contract for the city of Miami.

Warren county, J. G. Sherard, chancery clerk, Vicksburg, Miss., has voted \$150,000 of road bonds and \$60,000 bridge bonds, bids for the purchase of which will be received early in January.



# LUMBER AND BUILDING MATERIALS

## The Lumber Situation.

Washington, December 9.—The feature of the national lumber movement last week, as inferred from reports of 499 of the leading lumber mills of the country, says the National Lumber Manufacturers Association, was a gain in softwood shipments and production and some decrease in the current order file as compared with the immediate preceding week. It should be noted, however, that in that week 17 more mills reported than for the week of December 4, which points to the conclusion that new business was about the same for the two weeks, while shipments and production were much larger in the latter. As compared with a year ago, there was, however, a heavy decrease in new business, a falling off in shipments, with production about the same. The 138 hardwood mills in the foregoing total report an increase in new business and marked expansion of production and shipments.

The unfilled orders of 225 Southern Pine and West Coast mills at the end of last week amounted to 518,118,596 feet, as against 526,516,946 feet for 226 mills the previous week. The 121 identical Southern Pine mills in the group showed unfilled orders of 201,367,320 feet last week, as against 198,891,660 feet for the week before. For the 104 West Coast mills the unfilled orders were 316,751,276 feet, as against 327,625,286 feet for 105 mills a week earlier.

Altogether, the 345 comparably reporting softwood mills had shipments 90 per cent and orders 82 per cent of actual production. For the Southern Pine mills these percentages were, respectively, 81 and 85, and for the West Coast mills 87 and 76.

Of the reporting mills the 315, with an established normal production for the week of 213,971,295 feet, gave actual production 96 per cent, shipments 85 per cent and orders 77 per cent thereof.

The following table compares the softwood lumber movement, as reflected by the reporting mills of seven regional associations, for the three weeks indicated:

	Past week	Corresponding week 1925	Preceding week 1926 (revised)
Mills .....	345	347	362
Production .....	210,707,435	210,263,968	198,546,501
Shipments .....	189,832,788	209,030,282	175,886,162
Orders .....	172,994,684	238,980,839	181,257,762

The following revised figures compare the softwood lumber movement of the same seven regional associations for the first 48 weeks of 1926 with the same period of 1925:

	Production	Shipments	Orders
1926 .....	11,415,258,908	11,564,896,762	11,432,977,085
1925 .....	11,573,906,233	11,413,572,756	11,266,973,947

The Southern Pine Association reports from New Orleans that for 121 mills reporting shipments were 19.15 per cent below production and orders 15.39 per cent below production and 4.66 per cent above shipments. New business taken during the week amounted to 55,651,200 feet, shipments 53,175,540 feet and production 65,770,920 feet. The normal production of these mills is 75,829,640 feet. Of the 118 mills reporting running time, 84 operated full time, 21 of the latter over-time. Four mills were shut down and the rest operated from one to five and one-half days.

The North Carolina Pine Association of Norfolk, Va., with three more mills reporting, shows substantial increases in production and shipments and a marked decrease in new business.

The Hardwood Manufacturers Institute of Memphis, Tenn., reported from 115 units production as 19,053,819 feet, shipments 17,815,548 and orders 17,396,334. The normal production of these units is 20,106,000 feet.

## Southern Clay Products Association Formally Organized.

In the MANUFACTURERS RECORD of November 4 mention was made of the formation of the Southern Clay Products Association, which has since been formally organized at a meeting held at Macon, Ga., on November 9. This news is regarded by architects, contractors and dealers as one of the constructive developments of recent years in the Southern building material field. Nine leading manufacturers of brick and hollow tile have already joined the association and it is expected that several other manufacturers will announce their membership within a few weeks.

The feeling that the South is looking forward to years of increased building activity is said by leaders in the movement to have been an influencing factor which brought so many competing companies together for co-operative effort.

The announced purpose of the association is to "educate the public in the great advantages of burned clay products as building materials and thereby increase their use." It is to promote, through advertising and other publicity, the sale of clay products, and by legitimate and lawful means further the interests of the industry.

Such an association has not been practicable until recent years because of the varying specifications by different plants in manufacturing. Now, it is announced, all the manufacturers who are members of the association are adhering to the specifications prescribed by the United States Bureau of Standards for standard brick and hollow tile.

The executive secretary, Clarence Seavers, will have charge of the office at headquarters in Macon and will direct the research and promotive work. He is a graduate of the Case School of Applied Science, Cleveland, Ohio, and also of Ohio State University. For years he has been a building specialist, starting as a draftsman and later branching out into engineering work, estimating and contracting. He will be in a position to conduct research and co-operative work helpful to architects, contractors, dealers and builders.

The association's first president is W. E. Dunwoody, president of the Standard Brick and Tile Company of Macon. Other officers were also elected as follows for the coming year: J. L. Hankinson, Georgia-Carolina Brick Company, Augusta, Ga., first vice-president; C. W. Dixon, Gamble and Stockton Company, Jacksonville, second vice-president; A. H. Merry, Merry Brothers, Augusta, Ga., treasurer.

The charter members of the Southern Clay Products Association include the following companies: Columbus Brick and Tile Company, Columbus, Ga.; Gamble and Stockton Company, Jacksonville, Fla.; Dixie Brick Company, Columbus, Ga.; Bickerstaff Brick Company, Columbus, Ga.; Kaolin Brick Company, Columbus, Ga.; Merry Brothers, Augusta, Ga.; Georgia-Carolina Brick Company, Augusta, Ga.; McKenzie Brick Company, Augusta, Ga., and the Standard Brick and Tile Company, Macon, Ga.

## Work to Begin on \$1,000,000 Apartments.

St. Louis, Mo.—Construction is ready to start on a \$1,000,000 apartment building to be erected at 3733 Lindell boulevard, this city, for the Frances-Rolf Realty Company, with offices at 110 North 7th street. The structure will be 14 stories, 120 by 100 feet, of reinforced concrete, brick and terra cotta, with concrete foundation, concrete, tile and terrazzo floors and tile and composition roof. Pleitsch & Price are the architects and the William H. Smith-Neelson Cunliff Company general contractor, both of St. Louis.

## MECHANICAL

### Paint-Spray Brush Without Paint Hose.

A new device, known as a low-pressure siphon-feed paint-spray brush, the novel feature of which is that no paint hose is required in the process of painting, is illustrated in the accompanying halftone picture, which shows the brush in use for the application of traffic markings on a city street. This, however, is but one of its many uses, for it can be employed in spray painting of buildings, freight cars, railroad switches, semaphore signals, baggage trucks, etc.; in fact, for coating with paint any wood, metal or concrete.

The manufacturers of this improved brush, the Simons Paint Spray Brush Company of Dayton, Ohio, say that it can be operated anywhere where there is a compressed-air pipe line available by simply attaching the air hose that is coupled to the air brush. The outfit consists of a paint-spray brush, a container of desired size, a pressure-regulator valve and 25 feet of braid-covered special-strength air hose with couplings. The regulator valve is an essential device to be placed in the source of air supply, to which the paint-spray brush must be attached; the valve controls the pressure required for atomizing the liquids that are to be passed through the brush.

The absence of a paint hose with its accompanying difficulties makes the paint-spray brush very useful in painting for any of the various departments of a railroad organization. The brush can be easily changed from one color of paint to another in three minutes, it is remarked, this being done by plunging the suction end of the brush into gasoline, pulling the air trigger eight or ten times and wiping off the



SIPHON-FEED PAINT-SPRAY BRUSH IN USE.

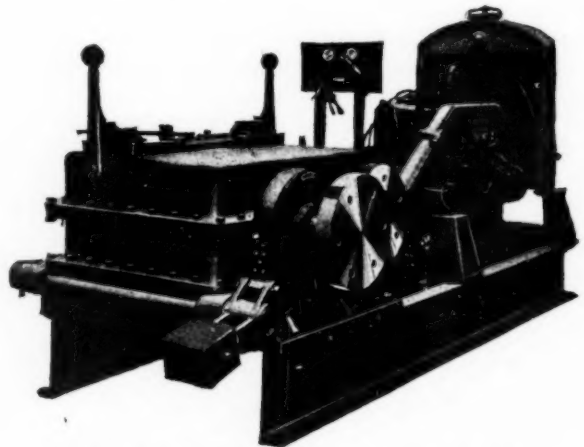
suction tube when the brush is ready to handle another color. The great saving of time and paint by the use of this device commends it.

There is also made by the company a portable electric air compressor run by a one-half-horsepower electric motor, power being taken from an ordinary lamp socket, or else a gasoline portable air compressor when there is no electric current at hand.

### New Type of Power Unit.

The accompanying picture represents a new type of power unit that is manufactured by the Earle Gear and Machine Company of Philadelphia and which is used as a prime mover or for stand-by purposes in operating movable bridges, lock gates, large valves, etc. It is built in various sizes from 15 to 100 horsepower and it weighs from 2000 pounds for the smallest to 3500 pounds for the largest size.

In the construction of this unit a standard make of gasoline engine is used, with accessories, such as radiator, magneto, starter, generator, storage battery, disc clutch, etc. The gear box is of the company's own manufacture, and it pro-



VIEW OF POWER UNIT ON STEEL FRAME.

vides for either one or two reversible power take-offs at right angles to the unit, and on either side of the box, or for one or two reversible power take-offs at the rear of and parallel to the engine crankshaft.

A brake is provided when required to facilitate accurate handling of the machinery wedges or signals. The gear-box housing is made of close-ground iron. Bearings are of anti-friction metal. All gears have cut teeth and are made of forged alloy steel.

This unit is mounted on a structural steel frame, and the company says it is compact, reliable, smooth running and dust-tight.

### For Effective Use of Steel in Building Work.

The addition to its staff of a new field engineer in the person of James N. Keenan, formerly chief engineer of the H. H. Robertson Company, Pittsburgh, Pa., marks the second step in the organization of a corps of field engineers by the American Institute of Steel Construction, New York. C. Alexander Miller, formerly of the faculty of the Case School of Applied Science, Cleveland, Ohio, some weeks ago entered the employ of the Institute as the first member of the corps. Both new members of the staff will devote most of their time to maintaining close contact with engineers, architects, contractors, bankers, municipal officials and others interested in construction. They will also work with faculties and students in technical schools, supplementing theoretical training with results of practical experience. According to Lee H. Miller, chief engineer of the Institute, under whose direction Mr. Keenan and Mr. Alexander Miller will work, the new engineers will place at the disposal of those with whom they establish contact the latest data regarding the most economical and effective use of steel in construction operations. Mr. Keenan's headquarters will be in the executive office of the Institute, 285 Madison avenue, New York city. Alexander Miller has his headquarters at Cleveland, Ohio, in the offices of the Institute's Engineering Department.



# CONSTRUCTION DEPARTMENT

## EXPLANATORY

Additional information is published about all enterprises mentioned in this department as soon as such data can be obtained.

An asterisk (\*) following an item indicates that the enterprise has been reported in a preceding issue.

## DAILY BULLETIN

The Daily Bulletin is published every business day to enable its subscribers to follow up promptly the industrial, commercial, railroad, financial, building and general business development of the South and Southwest. To machinery manufacturers and dealers, contractors, engineers, and others who require daily information of every new enterprise organized and details about important additions to enterprises already established, the Daily Bulletin is invaluable. Subscription price, \$3.00 a year.

### Airplane Plants, Stations, Etc.

Texas—Office of Constructing Quartermaster, Ft. Sam Houston, San Antonio, Tex., receives bids Jan. 3 for construction of hangar at Ft. Crockett, standard steel, 110x200 ft., and one 66x140 ft., concrete floors and approaches.\*

### Bridges, Culverts and Viaducts

#### Proposed Construction

Ala., Mobile—Louisville & Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, Ky., plans 3 bridges across Tensaw River; steel and concrete bridge similar to bridge across Mobile River; bridge at Bayou Sara.

Fla., Clearwater—Pinellas County Commrs. receive bids Dec. 28 to widen 7 bridges in county.

Fla., Pensacola—State Road Dept. of Florida, Tallahassee, and State Highway Dept. of Alabama, Montgomery, may receive bids within 30 days for 2 creosoted lumber bridges on Old Spanish Trail, between Jacksonville and New Orleans; Styx River Bridge and bridge across Perdido River, opposite Styx.

Fla., Punta Gorda—Charlotte County Commrs. receive bids probably Jan. 15 for 2800 lin. ft. bridge over Miakka River, wood trestle approach, 114-ft. steel pony truss draw, estimated cost \$150,000; 600 cu. yd. plain concrete, 150 tons structural steel, 18,000 lin. ft. creosoted piling; C. W. Creekbaum, County Engr.\*

Ga., Augusta—State Highway Depts. of Georgia, East Point, and South Carolina, Columbia, and Richmond County, Ga., and McCormick County, S. C. Commrs. plan interstate bridge over Savannah River at Furey's Ferry on Greenville-Augusta road, Highway No. 20, estimated cost \$250,000.\*

La., Baton Rouge—Louisiana Highway Comm. plans 2 bridges. See Roads, Streets, Paving.

Oklahoma—State Highway Comm., Oklahoma City, will build 10 bridges. See Roads, Streets, Paving.

Okl., Guthrie—Logan County and Fort Smith & Western Ry. Co., B. F. Beckman, Ch. Engr., Fort Smith, Ark., plans underpass on road about 3 mi. east of railway station at Guthrie.

Tennessee—Dept. of Highways and Public Works, Nashville, considering building 4 toll bridges over Tennessee River: At Loudon, Trotter's Landing, Savannah and Perryville; C. N. Bass, State Highway Commr.

Tex., Corpus Christi—Flour Bluff Causeway Co. plans causeway from mainland at Flour Bluff to Padre Island.

Virginia—State Highway Comm. will build 7 bridges. See Roads, Streets, Paving.

#### Contracts Awarded

Fla., St. Petersburg—Treasure Island, Inc. (Donovan & Sons), E. A. Donovan, Pres., Sixth St. and Central Ave., let contract to Tampa Sand and Shell Co. to build Central Ave. causeway, extending city's main street to Gulf.\*

Miss., Pascagoula—Jackson County Board of Suprvs., K. W. Burnham, Pres., let contract to Arthur Allen, Pascagoula, at 28 cents per cu. yd. for 42,435 cu. yd. earth fill approaches to bridge across Dog River near Randall's Ferry.\*

Mo., Nevada—Independent Construction Co., Pittsburg, has contract to build 2 bridges on Nevada road.

Tex., San Antonio—City Comm. let contract to Pryor & Jeffrey at \$11,975 for Lake View Avenue Bridge.

Va., Bristol—City, John D. Keeler, Mgr., let contract to Alley Construction Co. for underpass under tracks of Southern Ry. connecting Piedmont Ave. with street over Beaver Creek.

### Canning and Packing Plants

Ark., Little Rock—J. W. McCray reported interested in establishment of canning plant in North Little Rock.

Fla., Crestview—Okaloosa County Chamber of Commerce, R. F. Frary, Sec., interested in establishment of blueberry canning plant.

Tex., Aransas Pass—Aransas Pass Canning Co., capital \$50,000, incorporated; Harris Johnston, D. B. Chapin.

### Clayworking Plants

Fla., Crestview—R. R. Wilkinson Construction Co. planning erection of brick plant.

Tenn., Chattanooga—Tennessee Clay Products Co., capital \$25,000, incorporated; T. O. Trotter, Jr., James Bldg.

### Coal Mines and Coke Ovens

Va., Dunganon—The Hagan Coal Co., Inc., Bristol: capital \$25,000, chartered; Charles F. Hagan, Ruth M. Lewis; has about 5000 acres in contemplation; daily output, 3 to 5 cars at present. contemplates increasing daily; have all machinery for present needs.

### Concrete and Cement Plants

W. Va., Kenova—Basic Products Co., A. T. Wood, Gen. Mgr., reported will soon begin manufacture of cement under trade name "Basic Portland Cement"; secured titles to properties in Kentucky; begun development; machinery purchased from Allis Chalmers Mfg. Co., Milwaukee, Wis.; slurry tanks from Huntington Boiler Works, Huntington, W. Va.; buildings erected by McClintic-Marshall Co., Pittsburgh, Pa.

### Cotton Compresses and Gins

Ala., Felix—J. Freeman Suttles, Sr., reported plans rebuilding burned gin.

Miss., Flora—Jones-Wilson Gin & Milling Co., capital \$25,000, incorporated; J. E. Wilson, Hal J. Jones.

Tex., Beaumont—Thompson-Lockhart Electric Co., 794 Pearl St., has contract for installation of wiring for lights in Municipal Warehouse and compress to be constructed at city wharf; 900 ft. x 124 ft., cement and sheet iron; R. C. Black, City Engr.\*

Tex., Turkey—Childress Compress Co., Childress, contemplates establishing compress.

### Drainage, Dredging and Irrigation

Tex., Brownwood—Water Conservation Dist., care of A. C. Bratton, Chmn., Chamber of Commerce, contemplates calling election on \$5,000,000 bonds for construction of dam below junction of Jim Ned Creek and Pecan Bayou.

### Electric Light and Power

Large sums are being expended for electric light and power work in connection with Land Development operations. Details will be found under that classification.

Ala., Magnolia Springs—Foley Light and Power Co., Foley, will probably extend electric service.

Ark., McGee—Arkansas Power and Light Co., Pine Bluff, reported will expend \$100,000 for improvements to electric light system and \$75,000 for water works; construct 300,000 gal. reservoir; R. D. Shelton and E. T. Brown in charge of construction.

Ark., Mena—Southwestern Gas and Electric Co. will expend \$20,000 for rebuilding and improvement of electric lighting system; R. G. Eargle, Texarkana, in charge.

Fla., Belleair—Pinellas County Power Co., St. Petersburg, reported acquired 30 year franchise carrying 10 year lighting contract.

Fla., Fernandina—City accepted bid of Southern States Power Co., Blum Bldg., Jacksonville, subject to ratification by people, for purchase of electric light, water utilities and ice plant.

Fla., St. Augustine—City has plans under consideration for installing white way system; expect to receive bid for installation from Florida Power and Light Co. through St. Augustine office.\*

Ga., Baxley—Georgia Southern Power Co., Dublin, reported acquired municipal power plant.

Ga., Edison—Baker County Power Co. reported has 20 year franchise; acquired light plant and water system.

Ga., Folkston—City reported received offer from G. C. Henry, Ortega Blvd., and Howard P. Morris, 118 Cherry St., Jacksonville, Fla., for purchase of electric light plant and installation of improved plant; also plans installation of ice plant.

Ga., Lakeland—City plans installation of electric light plant. Address The Mayor.

Ga., Ludowici—J. D. Linville, Waycross, is installing electric light plant, machinery and equipment.

Ga., Screven—Ware County Light and Power Co., Waycross, reported to extend transmission lines from Screven to Jesup.

Ky., Paducah—See Railway Shops and Terminals.

La., Baton Rouge—Stone & Webster, Inc., interests, Boston, Mass., reported plan development of electric power lines in territory between Baton Rouge and Houston, Tex.; plans covering improvements for period next 5 years; include laying additional submarine cable between Baton Rouge and Port Allen, erecting 10,000 kv-a substation at Port Allen, extension of spray pond at power station, constructing 66,000 volt transmission line between Port Allen and Opelousas, a 30,000 kw. power station to be constructed either on Mississippi or Atchafalaya rivers.

La., Rayville—Town, George Wesley Smith, Mayor, plans to increase electric light plant; will decide on Dec. 21 whether to install steam or additional oil burning engines or gas engines.

Md., Rock Hall—Chestertown Electric Light and Power Co., Chestertown, and Town Council, Rock Hall, plans improving lighting facilities.

Miss., Scooba—Inland Utilities Co., Kansas City, Mo., has franchise for construction, operating electric light plant.

Miss., Shuqualak—Inland Utilities Co., Kansas City, Mo., reported granted 25-year franchise; acquired electric light plant.

Mo., Cape Girardeau—City Council ordered installation of electric lights in Red Star, Smeiterville and Koch suburbs.

Oklahoma—Oklahoma Gas and Electric Co., Oklahoma City, reported planning acquisition of Guthrie Light and Power Co., owned by Public Service Co. of Oklahoma and the Shattuck Light and Power Co.'s properties, and Southwestern Light and Power Co., Oklahoma City, planning acquisition of properties at Clifton and Elk City.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Oklahoma—Frederick and Devers Dierks Kansas City, Mo., reported applied to State Drainage Comsn., Oklahoma City, for permission to construct hydro-electric project on Mountain Fork River in McCurtain County.

Okla., El Reno—J. Y. Taylor, Roy Jones and others reported interested in installing white way system; Z. Hirsch, 423 W. 20th St., Oklahoma City, has prepared tentative plans.

Okla., Anadarko—City voted \$40,000 bonds for installation of 400 h.p. Diesel engine and generator; H. E. Musson & Co., Engrs., Grain Exchange Bldg., Oklahoma City.

Okla., Guymon—Inland Utilities Co., subsidiary of Fairbanks, Morse & Co., 1218 Liberty St., Kansas City, Mo., reported to be considering purchase of light plant.

Okla., Wewoka—City let contract to Cater Construction Co., 124 W. Fifth St., Kansas City, Mo., for 36 standards in white way; cost \$7700.\*

South Carolina—Broad River Power Co., Columbia, reported making surveys on Broad River near Dravo for steam plant.

Tex., Dallas—Texas Public Utilities Corp., chartered by W. B. Head, 4215 Lake Side Drive.

Tex., Floydada—Texas Utilities Co., 408 Pine St., St. Louis, Mo., reported has contract for installation of white way system.

Tex., Humble—Houston Lighting and Power Co., Electric Bldg., Houston, advises have acquired equipment of Texas-Louisiana Power Co. at Humble, but do not contemplate any improvements.\*

Tex., McLean—Southwestern Public Service Co., Amarillo, reported acquired municipal electric and ice plants.

Va., Christiansburg—Town Council considering installation of white way system.

Va., Lynchburg—City, R. W. B. Hart, Mgr., reported granted 10-yr. contract to Appalachian Electric Power Co., Bluefield, W. Va., for city lighting.

Va., Portsmouth—City Mgr. Hanrahan and City Engr. Weaver planning rearrangement of street lighting system.

Va., Richmond—Stone & Webster, Inc., Boston, Mass.; Blair & Co., Inc., Brown Brothers & Co., Blodgett & Co., all New York, are offering \$6,000,000 first and refunding mortgage gold bonds, Series A, of Virginia Electric and Power Co.; company has under construction \$5,000,000 power station at Norfolk.

### Foundry and Machine Plants

Ala., Birmingham—Stockham Pipe Fitting Co., 4100 N. Tenth Ave., reported let contract to H. K. Ferguson Co., Title-Guaranty Bldg., for pipe shop and general repairs and additions to present plant; estimated cost \$50,000.

Ala., Gadsden—Stoves—The A. and J. Manufacturing Co. plans building extension to main foundry building, 80x100 ft., also erect 80x130-ft. warehouse; both structures steel construction; soon begin work.

Ga., Columbus—Cen-Tennial Cotton Gin Co. increased capital, \$25,000 to \$100,000.\*

Md., Baltimore—Bartlett Hayward Co., 200 Scott St., has permit for two 1-story buildings on Ryan St.; 26x28 ft. and 56x48 ft., steel construction; Kubitz & Koenig, Archts., Emerson Tower; Morrow Bros., Builders, Fidelity Bldg.

Tenn., Nashville—Parlor Furnace—Allen Manufacturing Co., 300 Tenth Ave. N., building 3-story warehouse for additional storage space; contracts let.\*

Tex., Lufkin—Lufkin Foundry & Machine Co. has permit for \$15,000 plant.

### Gas and Oil Enterprises

Ark., Dierks—Magnolia Petroleum Co., Dallas, Tex., reported to construct wholesale oil station.

Ark., Pine Bluff—S. E. Byrd, J. P. Howe of Manhattan Oil Co., 16 W. Tenth St., Kansas City, Mo., and others reported interested in establishing refinery in building of Pine Bluff Refinery Co.'s plant on W. Fourth Ave.; plans expenditure of \$40,000 for one or more units and warehouse.

Fla., Plant City—City reported granted 30-yr. franchise to Gas Hydro-carbon Recovery Co., New York, for city gas service, construct \$300,000 plant.

La., Greenwood—Owl Oil Co., Shreveport, reported to construct 1-story, brick and reinforced concrete carbon black plant; construction by owners.

La., Opelousas—City, J. M. Prescott, Clk.,

plans either piping gas from gas fields or building artificial gas plant.

Miss., Aberdeen—Diamond L. Oil Co., capital \$50,000, incorporated; B. Frank Lamp-ton, C. E. Mize.

Mo., Kansas City—Kansas City Home Oil Products Co., capital \$20,000, incorporated; John T. Berry, 32 W. 58th St.

N. C., Shelby—Cleveland Oil Co., capital \$100,000, incorporated; S. A. Washburn, Shelby; J. Flem Johnson, Gastonia; acquired properties of Washburn Oil Co.

Okla., Earlsboro—Amerada Petroleum Co. reported to construct seven 50,000 bbls. steel storage tanks between Earlsboro and Seminole; extend pipe line.

Okla., Oklahoma City—Arrow Petroleum Co., capital \$10,000, incorporated; B. T. Head, V. B. Head.

Okla., Tulsa—Panhandle Co-operative Realty Co., capital \$100,000, incorporated; W. M. Darnell and Ed Smith, both Range.

Tex., Amarillo—Itallo-American Oil Co., Los Angeles, Cal., reported to acquire properties of Fly-Blackburn, Magic Eighty, Sunburst, The Apex and Mosestead Oil Co.

Tex., Amarillo—Diamond Oil Co., capital \$160,000, incorporated; E. R. Woodburn, 609 Fillmore St.

Tex., Corpus Christi—City Council authorized \$18,000 gas extension; work probably by day labor.

Tex., Dallas—W. V. N. Powelson, 555 Park Ave., New York, reported acquired Dallas Gas Corp.'s properties; will improve.

Tex., Dallas—Magnolia Petroleum Co., Magnolia Bldg., reported let contract to National Tube Co., Frick Bldg., Pittsburgh, Pa., for 60,000 tons of pipe for 10-in. oil line from Texas Panhandle to Gulf Coast.

Tex., Dallas—Mountain Oil Corp., capital \$30,000, incorporated; Pat Ethridge, 311 S. Clinton St.

Tex., Denison—Lovellette Gas and Oil Co., capital \$16,000, incorporated; F. G. Coleman, George Whitesides.

Tex., Fort Worth—M. O. and T. Corp., capital \$60,000, incorporated; R. A. Herring, L. L. Martin.

Tex., Houston—American Petroleum Co., Second National Bank Bldg., reported acquired 79 acres on north side of Ship Channel for probable expansion.

W. Va., Clarksburg—Russell Oil and Gas Co., capital \$50,000, incorporated; John W. Harbert, 489 Mechanic St.

W. Va., Martinsburg—Southern Gas and Power Co., Fox Bldg., Philadelphia, Pa., and Central Public Service Co., 209 S. LaSalle St., Chicago, Ill., reported consolidated; Southern Gas and Power operating companies are located in North Carolina, South Carolina, Georgia, Alabama, Texas, Virginia, West Virginia, Maryland and Kentucky; Central Public Service Co. operates in New York, Illinois, Wisconsin, Michigan, Indiana and Maine; furnish electric and power, gas and water service; gas manufacturing plants have rated capacity of 11,420,000 cu. ft. gas daily and distribution systems total 838 miles of mains; companies serve total population of 750,000; A. E. Pierce of Chicago will be president of merged companies.

W. Va., Milton—Big Two Mile Gas Co., capital \$50,000, incorporated; I. J. Harshbarger, First National Bank Bldg., Huntington.

### Ice and Cold-Storage Plants

Ark., Little Rock—Standard Ice Co., G. H. Kendrick, Sec., 921 Barber St., applied for permit for construction of ice plant at 1101-07 Summit Ave.; 1 story, reinforced concrete and steel, fireproof, estimated cost \$20,000; install \$20,000 equipment.

Fla., Fernandina—See Electric Light and Power Plants.

Fla., Miami—Florida East Coast Utilities, Inc., S. H. Gould, Pres., Johnson and Moffatt Bldg., advises are receiving bids for cold and dry storage and ice plant, costing approximately \$2,000,000; facilities of plant will allow constant supply of fruit, vegetables, meats and dairy products; Ophuls & Hill, Inc., Engrs., 112 W. Forty-second St., New York City.\*

Ga., Folkston—See Electric Light and Power Plants.

La., New Orleans—Orleans Ice Manufacturing Co., 1207 Chartres St., received low bid from N. Ascani, 3709 Dumaine St., for construction of 1-story office building and garage at Chartres and Governor Nicholls St.; reinforced concrete, brick and steel; E. M. Reynes, Archt., 822 Perdido St.\*

Tenn., Martin—Martin Ice & Coal Co., W. D. Roberts, Pres., reported let contract for erection of ice factory, 20-ton capacity, electrically operated; 50x70 ft.; location not selected.

### Iron and Steel Plants

Ala., Birmingham—The Southern Steel & Rolling Mill, Inc., M. J. Gerson, Pres., 3900 Tenth Ave. N., reported remodeling plant at 3900 N. Tenth Ave.; main building will be 290x100 ft., with wing 60x100 ft., all steel structure; construction by company's forces; manufactures reinforcing bars of patented design; maintains Florida office at Miami.

### Land Developments

Ala., Anniston—Clubview Heights, Inc., J. P. Whiteside, Sec., has 65 acres; will develop 15 acres for subdivision; construct streets, install water, sewers; H. B. Blackwell, Engr.\*

Fla., Coral Gables—City voted \$1,750,000 for golf course and \$100,000 for public parks and playgrounds; Edwin G. Bishop, Clk.\*

Fla., Sebring—James T. Holdtmann, Sarasota; R. B. James and others reported interested in development of 320 acres in grapes.

Fla., St. Petersburg—Pearce-Baynard Farms Co., 611 First Ave. N., organized by W. T. Baynard, C. B. Baker to develop 13,000 acres in Hardee County.

Ga., Atlanta—Walter C. Hardesty, Rio Vista, Fla., local office 185 Peachtree St., will develop 600 acres in Silver Lake section for development of subdivision; Albert A. Taylor, Landscape Archt., and City Planner, Cleveland, O.; reported to begin construction work in Jan. on expenditure of \$5,000,000; construct seawall, dam, lake and cascade layouts, artistic street lights and entrance ways.

Ga., Savannah—Weitz Realty Co., capital \$10,000, incorporated; L. D. Weitz, Sr., 209 N. 37th St.

Ky., Newport—Metzel-Adams Realty Co., Ben A. Adams, Sec., will develop 33-acre subdivision; install streets, sewers, etc.\*

La., New Orleans—Chinchuba Land Co. incorporated; Angelo D. Piaggio, W. B. McKinstry.

La., Shreveport—City, L. E. Thomas, Mayor, advises plans to acquire 4 acres of land for tourist park, but development of same will not occur until next year.\*

Md., Aberdeen—Photo-Sculpture Corp. of America incorporated; Walter G. Chandler, Ralph Robinson.

Md., Baltimore—Richard McSherry, 325 Woodlawn Rd., reported acquired 665 acres in Curtis Bay; develop subdivision.

Md., Rockville—B. B. & M., Inc., incorporated; Stephen A. McClelland, Lowell S. Harding.

Mo., Joplin—F. H. Gager, 1909 Kentucky St., reported interested in development of Memorial Park cemetery on 138 acres; construct driveways, 2 ornamental entrances, greenhouse and 2 shelter houses.

Mo., Kansas City—Ward Parkway Building Corp., capital \$40,000, incorporated; N. W. Duff, 3717 E. Seventh St.

Mo., Kansas City—T. M. Hollyman Investment Co. incorporated; John F. Cell, 907 Grand Ave. Temple.

Mo., Kansas City—Sales Investment Co., capital \$10,000, incorporated; W. E. Stickel, Federal Reserve Life Ins. Bldg.

Mo., St. Louis—City and Park Comn. plans development of 300 acres wooded land on Allenton Rd. for park, construct roads, lake of 15 acres.

Mo., St. Louis—Korte Realty and Loan Co., 106 N. Eighth St., and H. Kissell Sons, 4107 W. Florissant Ave., are developing subdivision on Anderson, Bessie Aves. and Penrose St.; install water, sewers, gas and electricity.

Mo., St. Louis—Curran-Crews Realty Co., 110 Title Bldg., organized; George W. Curran, Marvin L. Crews.

N. C., Troy—Oakdale Development Co., capital \$20,000, incorporated; J. C. Hurley, Moses Moscovitz.

Okla., El Reno—City plans voting on bonds for park and cemetery. Address The Mayor.

Okla., Tulsa—Park Board, Newt R. Graham, Pres., plans development of park system.

Tenn., Cleveland—Sweetwater Realty Co., capital \$20,000, incorporated; I. N. Taylor, J. C. Oates.

Tex., Abilene—West Texas Utilities Co. reported to develop 300 acres for subdivision; install water, distributing system, gas, lights, telephone, sewer, sidewalks, paved streets, cost

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\$200,000; Koch & Fowler, Engrs., 801 Central Bank Bldg., Dallas.

S. C., Spartanburg—M. S. Christman will develop 81 acre subdivision.

S. C., Spartanburg—A. O. Willard, 159 E. Main St., and E. Z. White, 585 Otis Blvd., will develop subdivision.

Tex., Austin—Austin Development Co., capital \$250,000, S. W. Fisher, Pres., 2102 Guadalupe St., reported plans development of subdivision north of Peace Park and Enfield Addition, construct lake; Koch & Fowler, Landscape Archts., 801 Central Bank Bldg., Dallas.

Tex., Austin—S. W. Fisher, 2102 Guadalupe St., receives bids Dec. 18 for subdivision development, 155 acres; install water distribution system, sewers, street paving, lights, telephone, sewer, sidewalks, paved streets, cost \$125,000; Koch & Fowler, Engrs., 801 Central Bank Bldg., Dallas.

Tex., Brownsville—J. V. Brassfield, S. B. Bass, 7661 Sheridan Rd., both Chicago, Ill., reported acquired 11,000 acres in Rio Grande Valley; will subdivide and market property through the Gilloch Development Co., Chicago; plans expenditure of \$1,700,000 for development into agricultural belt with concrete lined irrigation canal, concrete highway, etc.

Tex., Denton—City Park Board plans development of parks.

Tex., Edna—LaWard Land and Immigration Co., B. C. Lucas, Pres., reported to develop 30,000 acres in Jackson County for subdivision and model farm.

Tex., Houston—Broadway Realty Co. incorporated; David Picton, Jr., Great Southern Bldg.

Tex., Houston—East End Realty Co., capital \$15,000, incorporated; E. C. Johns, 6517 Harrisburg St.

Tex., Houston—E. J. Burke Co., Suite 544, First National Bank Bldg., will develop subdivision.

Tex., Houston—R. C. Peters, Omaha, Neb., and associates reported acquired 1750 acres in Galveston County; develop subdivision.

Tex., Houston—Harry K. Johnson will develop 8000 acres for subdivision; build 40 dwellings, install water works, build shell roads; J. C. Eubank, 508 Stewart Bldg.\*

Tex., Rio Grande City—Rio Grande Valley Income Properties, Inc., chartered; Alvin Giles, E. H. Banta.

Tex., San Antonio—Woodlawn Hills Development Co., 217 N. St. Mary's St., increased capital, \$70,000 to \$225,000.

Va., Bristol—Sevier Terrace Realty Co., capital \$100,000, incorporated; H. H. Haynes, Jr., John W. Flannagan, Jr.

Va., Newport News—Three Way Development Corp., Box 402, incorporated; Louis Loeb.

Va., Norfolk—Riverdale Land Co., capital \$10,000, incorporated; P. L. Banks, McKevitt Bldg.

W. Va., Morgantown—Industrial Development Co., capital \$50,000, incorporated; Glenn Hunter, Price Bldg.

### Lumber Enterprises

Fla., Guntown—Grove—Dowling Hardwood Lumber Co. reported let contract to Thrall & Shea, Lake Charles, La., for construction of 500,000 sawmill, capacity 150,000 ft. per 10 hour day.\*

Ga., Dalton—Aeme Lumber Co., capital \$15,000, incorporated; B. R. Benton, H. H. Judd.

Mississippi—D. S. Pate Lumber Co. of Columbus, Miss., acquired timber holdings in Pickens County; plans for development not made.

Miss., Biloxi—Back Bay Lumber Co. incorporated; C. E. Kendall, Jerry Oliver.

### Mining

Texas—S. A. Krom of New York City, with headquarters at Troup, Tex., reported interested in developing iron ore and other minerals in Cherokee County.

### Miscellaneous Construction

Fla., Coral Gables—Swimming Pool—City has \$200,000 available for construction municipal swimming pool; Edwin C. Bishop, City Clerk. See Financial News—Bond Issues Proposed.\*

Fla., Daytona Beach—City will rebuild approaches to beach which is used as a driveway; cost \$10,000; plans drawn; city will do work; Walter A. Richards, City Mgr.\*

La., New Orleans—Ogden & Lewis, Baton

Rouge, low bidder at \$21,400 for construction of approximately 165,000 cu. yds. earthwork in the Red River, Atchafalaya and Bayou Boeuf Levee Dist.; bids received at U. S. Engineer Office, Burdette St.\*

Miss., Bay St. Louis—Seawall—Hancock County Board of Supvrs. will receive new bids Jan. 4 for construction of seawall, \$1,250,000 project; approximate quantities are 48,800 lin. ft. stepped type concrete wall; 2679 lin. ft. drain pipe, 12 and 36 in. diam.; 104 cu. yds. concrete in culverts; 88,920 lbs. reinforcing steel in culverts; 10,830 cu. yds. earth excavation; 261,500 cu. yds. dredged earth fill; J. W. Billingsley, Const. Engr., Interstate Bank Bldg., New Orleans, La.\*

Tex., Houston—Channel—Harris County Commrs. have \$1,500,000 available for improvements along ship channel; proposed improvements include additional facilities for grain elevator, additional wharves, bulkheads, etc. (See Financial News—Bond Issues Proposed.)\*

### Miscellaneous Enterprises

Ala., Birmingham—American Bakeries Co., 2730 Avenue E, let contract to Smallman-Brice Construction Co., 1115 Avenue G, to remodel bakery building at 2008 Avenue F; estimated cost \$100,000.

Ala., Huntsville—Toys—James L. Kendall, P. O. Aitken and associates interested in establishing toy factory.

Ark., Camden—International Paper Co., 100 E. Forty-second St., New York City, will establish \$5,000,000 paper and fiber mill, to be located on the Ouachita River, to be named the Arkansas Fiber and Paper Co.; will begin construction in January, 1927, and plans completion of plant November, 1927; four unit mill with output about 200 tons paper daily; consume 11,000,000 cu. ft. natural gas daily; the electric power requirements furnished by the Arkansas Light and Power Co.; 100-acre site furnished by city; initial output will be brown wrapping paper, later paper bags and wallboard will be manufactured.\*

Ark., Fort Smith—H. Wampler of Clever, Mo., reported, leased the Good Canning Co.'s plant on Jenny Lind Rd.; will operate under name of Fort Smith Canning Co.

Ark., Greenwood—C. Caudle, Sec. of Commercial Club, and associates interested in proposed establishment of \$100,000 milk condensary.

Fla., Clearwater—Frank E. Pulver acquired Clearwater Herald; continue existing business.

Fla., Jacksonville—The Suwannee Cold Storage Co. reported acquired packing plant; will operate.

Fla., Miami—Florida Stucco Products Co., Omar Abernathy, will soon begin construction of plant on North Bay Rd.; manufacture colored stucco products; daily capacity 40 tons; Pancoast & Sibbert, Archts., Masonic Bldg.; D. Richard Mead, Contr., 2324 N. Bay Rd.

Fla., Orlando—The Hyland Stanford Co. of Los Angeles, Cal., reported, will erect plant to manufacture concentrated fruit juices; leased site.

Fla., Pensacola—Escambia County Co-operative Hatchery, Route No. 3, W. Honsberger, Sec., has building with 2400-egg capacity incubator; contemplates installing 12,000-egg mammoth incubator for next season.\*

Ga., Atlanta—The United States Glass Co., Ninth and Bingham Sts., Pittsburgh, Pa., reported establish branch at 35 Ivy St. to serve Southern States.

Ga., Cochran—Mercantile—Cooper-Johnson Co., capital \$10,000, incorporated; R. T. Cooper, J. C. Johnson.

Ga., Waycross—The Georgia Milk Co., A. Palmer, Mgr. and Owner, will establish milk depot cor. Frances and McDonald Sts.; install pasteurizing machinery, etc., all purchased.\*

Ky., Lexington—The White Star Chain Markets, Inc., capital \$20,000, chartered; Walter I. Robbins, 118 Owsley Ave.; Homer B. Roysce.

Ky., Paducah—Edgewood Dairy Products Co., capital \$25,000, incorporated; S. A. Fowler, City Natl. Bank Bldg.

La., Lake Charles—R. L. and G. W. Cline, 1716 S. Ryan St., reported purchased 2-story brick building on Broad St. for new home of Lake Charles Steam Laundry, remodel, and new buildings, including power house and garages, will be erected at rear of property; install new equipment.

La., New Orleans—La Dew-Casey Engineering Co., Inc., chartered; William La Dew, Edna M. Casey.

La., New Orleans—C. V. Harold Rubber Co., Inc., chartered; C. W. Harold, 1430 S. Carrollton St.

Md., Baltimore—Food Products—Crosse & Blackwell, Ltd., of London and 105 Hudson St., New York City, let contract to Wm. Meyer, Philadelphia, and Fifth St., Baltimore, for excavation for \$1,500,000 plant to be erected on Eastern Ave. near Forty-second St.; work to begin immediately.\*

Md., Baltimore—Stationary and Marine Engines—Mahon & Gall, Inc., Pratt and Gay Sts., capital \$10,000, incorporated; John J. Mahon.

Md., Baltimore—Red X Laboratories, Inc., 1305 Fidelity Bldg., capital \$50,000, incorporated; Charles C. Carver.

Md., Baltimore—Manufacturing Chemists—Kolo Products Co., Inc., Haines and Warner Sts., chartered; Robert M. Pettit.

Md., Baltimore—The Baltimore Feed and Seed Co., P. A. Bixler, Treas., 417 N. Holliday St., leased 40,000 sq. ft. floor space from Canton Co., 2341-49 Boston St.; will install additional equipment, increasing capacity.

Md., Baltimore—The Applefeld Clothing Co., Samuel C. Applefeld, Pres., 217 W. Baltimore St., plans erecting addition to present building, 5 story, 70x20 ft.; begin construction by Feb. 1, 1927.

Md., Baltimore—Try-Me Beverage Co., Peter E. Kekens, Pres., 2108 Fifth Ave. N., Birmingham, Ala., acquired 3-story, 50x150-ft. building at Madison Ave. and Preston St. (General Baking Co.); will remodel for bottling plant.

Md., Baltimore—The Maryland Fibre Products Co., Leonard Hehl, Pres., has taken over buildings of former plant of Wilkens Bros., Wilkens and Frederick Rd.; equip for manufacture of fibre and hair mixtures for brush makers; soon begin production.\*

Md., Ellicott City—Paul G. Stromberg of the Montgomery News, reported, acquired the Montgomery Advocate of Rockville, Md.; paper will be consolidated with the Montgomery News and known as the News-Advocate and printed for present at Ellicott City. P. G. Stromberg advises: "Printing work being done at plant of Maryland Printing and Publishing Co., Ellicott City; no erection plans at present time; old Advocate plant will be junked."

Md., Frederick—Frederick Machinery Co., James A. Rogers, Pres., W. Patrick St., advises will operate retail and distributing business for general farm equipment, dairy and road machinery; do not know what equipment needed until after Jan. 1, 1927.\*

Md., Rockville—Contracting—The Construction and Finance Corp., chartered; Stephen A. McClellan, Lowell S. Harding.

Miss., Laurel—Vick Coffee Co., capital \$10,000, incorporated; W. C. Singley, Central Ave.

Miss., Natchez—Natchez Hotel Co., incorporated; W. A. S. Wheeler, Frank J. Duffy.

Mo., Dexter—Statesman Publishing Co., Ed. P. Crowe, Pres. and Editor, 23 N. Walnut St., contemplates erecting 35x100-ft. office building, brick, tile and concrete, concrete floors; equipment will probably be furnished by American Type Founders Co., Ninth and Walnut Sts., or Barnhart Brothers & Spindler, 401 N. Third St., both St. Louis; will not be in the market until some time in 1927.\*

Mo., Kansas City—Soap—Merger is being negotiated by officers of Palmolive Co., Land Bank Bldg., and the Peet Brothers Manufacturing Co., 17th and Kansas Sts.; home plant of Peet Bros. Mfg. Co. is in Kansas City, Kan., and the Palmolive Co., 360 N. Michigan Blvd., Chicago, Ill.; other plants are in Chicago, Ill.; Portland, Ore.; Edgewater, N. J.; Toronto, Ontario, and Sydney, Australia.

Mo., St. Louis—The Mendle Printing Co., I. Mendle, Pres., 801 Lucas Ave., reported, leased 6-story building at cor. Third and Locust Sts.; will remodel for printing purposes.

Mo., St. Louis—Missouri Southern Public Service Co., capital \$20,000, incorporated; Geo. F. Torrey, 3820a Arsenal St.

Mo., St. Louis—Jantsen Drug Stores, Inc., capital \$100,000, chartered; Jean Jantzen, 4432 Washington St.

Mo., St. Louis—Plumbing, etc.—Silentite Co., incorporated; I. R. Goldberg, 235 Skinker St.

Mo., St. Louis—Brock Engineering Co., Arcade Bldg., capital \$200,000, incorporated; E. J. Brock, F. G. Hunt.

Mo., St. Louis—Rose Pharmacy, Inc., capital \$15,000, chartered; E. C. Funsch, 4101a Laclede Blvd.

Mo., St. Louis—Building Materials, etc.—

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Mitchell Coal and Material Co., incorporated; R. F. Mitchell, 4769 Easton St.

N. C., Black Mountain—Black Mountain Hardware and Supply Co., Inc., capital \$25,000, chartered; J. P. Ashley, J. E. Sylvester.

N. C., Charlotte—The Queen City Stores, Inc., capital \$100,000, chartered; Richard Beardsworth of Charlotte; Randolph Marshall, 3908 Peakland Pl.

N. C., Charlotte—The E. H. Jacobs Manufacturing Co., 35 School St., Danielson, Conn., manufacturers of leather and canvas textile loom equipment; will equip Southern factory in the Bostick Industrial Bldg., 501 W. Palmer St., operations to begin Jan. 1; Joseph H. Chadbourne, Jr., Vice-Pres., will be Southern representative; Frederick A. Jacobs and W. Irving Bullard will operate plant in Danielson.

N. C., Greensboro—Contractors Equipment—Carolina Tractor and Equipment Co., capital \$200,000, incorporated; W. C. Heitman, 1508 Woodland Way.

Okl., Enid—The North Independence Hospital Corp., capital \$25,000, chartered; W. B. Newell, P. W. Hopkins.

S. C., Anderson—F. T. Wright of the City Grocery Co. and associates contemplate establishing \$15,000 cannery, probably known as Anderson Farmers' Co-operative Cannery.

S. C., Charleston—Merchandise—The Belk-Robinson Co., capital \$90,000, incorporated; R. G. Robinson, Charleston; Dr. J. M. Belk, Monroe, N. C.

S. C., Columbia—Merchandise—Young, Glaze & Roberts, Inc., chartered; J. C. Roberts, 913 Lloyd Court.

S. C., Dillon—Fire Fighting Equipment—City let contract to the Seagraves Corp., Columbus, Ohio, for combination automobile pumper, hose and hook and ladder truck.

S. C., Greenville—Cinderella Slipper Salon, Inc., capital \$25,000, chartered; H. August, B. A. Pollock.

Tenn., Chattanooga—Egg Case Filler Manufacturing Co., North Chattanooga, increased capital, \$25,000 to \$75,000.

Tenn., Knoxville—Bakery—Swan Brothers, Inc., Box 891, erect 153x135-ft. plant, brick and concrete; all equipment purchased; construction begun.\*

Tenn., Memphis—John Q. Eaton, Rand Bldg., reported plans erecting \$40,000 film exchange at corner S. Second and Butler Ave.; fireproof throughout, steam heat; W. C. Lester, Archt., Dermion Bldg.

Tenn., Murfreesboro—Carnation Milk Products Co. of Seattle, Wash., reported, contemplates establishing plant; may purchase building of the Murfreesboro Pure Milk Co.

Tenn., Nashville—John Duke's Servurself Stores, incorporated; E. H. Duke, 32 Rutledge St.

Tenn., Morristown—W. L. Massengill and W. P. McKinney, reported, will establish rug factory.

Tenn., Union City—Herman Dietzel, Floyd Tucker and associates interested in establishment of creamery; estimated cost \$20,000.

Tex., Abilene—The Watts Manufacturing Co., Inc., 1426 N. Eighteenth St., has plant; J. N. Watts, Pres.-Mgr., advises: "In 1928 will install 3 plants in different states; can take care of output for 1927; use 60-ton Niagara press; we build our own dies and punches, both shearing, piercing and forming dies."\*

Tex., Amarillo—Dawson Produce Co., capital \$20,000, incorporated; G. B. Raines, K. W. Dawson.

Tex., Amarillo—Barefield Grain Co., incorporated; J. N. Beasley, Amarillo Bldg.

Tex., Austin—Merchandise—Maytag Texas Co. incorporated; F. J. Boesch, Gus Boesch.

Tex., Brenham—H. P. Fisher contemplates establishing broom factory.

Tex., Brownsville—Brownsville Hotel Co., capital \$25,000, incorporated; G. C. King, H. W. Stratton.

Tex., Canutillo—Gillett's Dairy Co., Inc., capital \$10,000, incorporated; Sam Gillett, Idus Gillett.

Tex., Corpus Christi—Dr. George Bacon of Bellville, Tex., reported, plans establishing plant to manufacture women's garments.

Tex., Dallas—Singleton's Dyeing and Dry Cleaning Co., capital \$10,000, incorporated; V. D. Singleton, 2542 Brandon St.

Tex., Dallas—Oil and Waterways Pump Manufacturing Co., capital \$30,000, incorporated; C. E. Eubanks, P. G. Savage.

Tex., Dallas—All Star Paint and Wallpaper Co. incorporated; Nathan Aronoff, 2808 1/2 Park Row.

Tex., Dallas—Gaston-Carroll Pharmacy,

capital \$12,000, incorporated; R. J. Windrow, 5647 Swiss St.

Tex., Fort Worth—Amusement Park—French Wilgus and E. R. Albaugh of Bellefontaine, Ohio, have contract for \$1,000,000 amusement park, Lake Worth bathing beach; work to start by Jan. 1, 1927; F. R. Furnas will be resident Mgr.; O. E. Carr, City Mgr.\*

Tex., Fort Worth—Acme Tent and Awning Co., 413 W. Rio Grande St., incorporated; H. S. Hogdon, S. W. Dunn.

Tex., Galveston—The Black Hardware Co., 2217 B St., increased capital, \$500,000 to \$1,000,000.

Tex., Harlingen—Gulf States Chemical Co., capital \$15,000, incorporated; C. H. Behse, D. W. Maxwell.

Tex., Houston—The Gulf Laundry, 7421 Harrisburg Blvd., capital \$20,000, incorporated; Charles Pond.

Tex., Houston—Johns Cash Stores, Inc., capital \$15,000, chartered; E. C. Johns, 6517 Harrisburg St.

Tex., Marshall—Hill Clothing Co., capital \$10,000, incorporated; Howard Hills, Mrs. Ella Hills.

Tex., Nacogdoches—East Texas Hatcheries, W. D. Ambrose, Pres.-Sec., will erect hatchery with monthly capacity 16,000 eggs; about 30x40 ft., concrete floors, tin roof, local labor; install one No. 34 Mammoth incubator to be furnished by the Buckeye Incubator Co., Springfield, Ohio. (See Machinery Wanted—Brooders, etc.; Chicken Feed.)\*

Tex., San Antonio—Heath & Kinsey Construction Co., Builders Exchange Bldg., increased capital, \$10,000 to \$20,000.

Tex., San Antonio—Commerce Airways Corp., chartered; R. L. Compton, H. L. Dreck.

Tex., San Antonio—Public Service Co., St. Marys St., plans erecting plant addition, 2 or 3 story, reinforced concrete, brick and terra cotta construction; Atlee B. & Robt. M. Ayres, Archts., Bedell Bldg.

Tex., San Antonio—The Naylor Painting Co., 210 E. Pecan St., increased capital, \$16,000 to \$20,000.

Tex., Sequin—Guadalupe Creamery, F. C. Weinst. Pres., let contract to Robert Felsing for plant addition, brick and tile, cement floors; install can washer, scales, conveyors, vats, pumps, etc.; daily capacity 500 gal. ice cream and 1000 lbs. butter; total cost \$15,000; equipment furnished by Toledo Scale Co., Toledo, Ohio; Jensen Creamery Machinery Co., Bloomfield, N. J., and the Pfandler Co., Rochester, N. Y.\*

Tex., Sherman—Day Manufacturing Co., Luther A. Day, has one complete unit for manufacture of set-up paper boxes, equipment furnished by Stokes & Smith Co., Summerdale Station, Philadelphia, Pa.; Hobbs Manufacturing Co., 608 S. Dearborn St., Chicago, Ill.; M. D. Knowlton, Rochester, N. Y. (See Machinery Wanted—Paper Box Machinery.)\*

Tex., Tyler—Made-Rite Mattress Co. will rebuild burned portion of plant.

Tex., Vernon—Eunice Wilson reported will erect bottling plant, 1 or 2 story, 60x100 ft., face and common brick, composition roof, stone trim, concrete floors, metal lath, steel sash, metal store fronts, etc.; Robert H. Stuckey, Archt.; receiving bids.

Va., Richmond—Keystone Inn, Inc., capital \$25,000, chartered; Eugene Bianchi, 3206-D Hanover Ave.

Va., Richmond—The Plee-Zing Corp., chartered; Herbert S. Traub, 134 45th St. E., Savannah, Ga.; Wm. H. Spencer, Richmond; operate and introduce trade marks, etc.

Va., Richmond—Tobacco—Philip Morris Consolidated, recently organized, 44 W. 18th St., New York City, also controls the Philip Morris, Ltd., and which recently acquired control of the Continental Tobacco Co. of Richmond, acquired 109x159-ft. site at Cary and Twentieth Sts., to erect factory for manufacture of cigarettes; cost between \$400,000 and \$500,000; reported, construction is planned to begin within short time, combination of the Continental Tobacco Co. and Philip Morris Consolidated is expected to mean transfer of the manufacture of a number of highest-grade cigarettes in America to Richmond; the Continental Co. has been making cigarettes and tobaccos for the Schulte Co. and Philip Morris for the United Cigar Stores; through the consolidated company these two chain stores will probably be linked; O. H. Chalkley, Sec., Philip Morris Consolidated, Inc., advises: "We are contemplating the erection of a factory in Richmond, Va., and Francisco & Jacobus, 511 Fifth Ave., New York, are working on plans."\*

Va., Roanoke—Appalachian Electric Power Co., J. W. Hancock, Pres., Bluefield, W. Va., reported, let contract to Eubank & Caldwell,

Broxley Bldg., Roanoke, for construction of \$85,000 building to be erected on Walnut Ave.; brick, steel and concrete, fireproof throughout; to be used as headquarters in this district.

Va., Roanoke—The Appalachian Electric Power Co., Bluefield, W. Va., reported, let contract for \$85,000 building, used as headquarters for Roanoke district; to be completed by March 1, 1927.

Va., Salem—Salem Creamery Co., Inc., capital \$25,000, chartered; Walter B. Smith, T. T. Smith.

Va., Tenn., Bristol—Crymble Electric Co., Inc., capital \$25,000, chartered; Carter Crymble, M. A. Sanders.

W. Va., Belle—Lazote, Inc., S. A. Wardenburg, V. P., subsidiary of the E. I. Dupont de Nemours Co., Wilmington, Del., reported will enlarge plant about 5 times present capacity, foundation for second unit has been completed since last August and work on third unit will probably start in spring of 1927; also increase capital, \$5,000,000 to \$10,000,000.\*

W. Va., Mannington—General Flat Glass Co., reported, will operate plant formerly operated by the Mountain State Glass Co.; Webb Engineering Co., Oliver Bldg., Pittsburgh, Pa., has contract for \$75,000 addition, 36x396 ft., concrete blocks, sheet iron, wood and concrete floor, sheet iron roof; install \$100,000 equipment; balance of work to be done under company's supervision; install 6 Foucault type window glass machines; H. E. Vaughn, Const. Engr., Mannington.

W. Va., Wheeling—The National Rug Co., capital \$10,000, incorporated; Louis Kraft, Charles F. Hall, Jr.

### Motor Bus Lines and Terminals

Fla., Coral Gables—City has \$1,782,000 available for acquiring street railway and bus system; Edwin G. Bishop, City Clerk. See Financial News—Bond Issues Proposed.\*

Ky., Lexington—The Consolidated Coach Corp., reported, acquired from J. W. Roberts of motor bus line operating between Georgetown and Owenton; line will be connected with company's through line from Lexington to Carrollton via Georgetown and Owenton.

Mo., Kansas City—See Motor Cars, Garages and Filling Stations.

Mo., St. Louis—St. Louis-Chicago Highway Transportation Co., capital \$10,000, incorporated; Julius E. Franklin, 4127a S. Grand St.

Tex., Galveston—Texas Bus Lines, Inc., Raymond G. Carroll, Mgr., 2928 J St., applied for permit to operate automobile sight-seeing line.

### Motor Cars, Garages, Filling Stations

Ala., Bessemer—Dennis Automobile Co. will occupy building at Nineteenth St. and Seventh Ave.; 1 story, 100x100 ft., hollow tile and steel, asphalt roof, metal sash, concrete floors, etc.; estimated cost \$15,000; Geo. P. Dexter, Contr., 3470 Highland Ave.; erected by the A. T. Dexter Estate.

Ala., Birmingham—Philip Lombardo, care of Marx & Co., Brown-Marx Bldg., let contract to J. B. Perusini, 1112 N. Fourteenth St., for filling station at Ave. D and Twenty-fourth St., 1 story, brick, slate roof, concrete floors and concrete drives, oil pits, etc.; Warren, Knight & Davis, Archts., 1603 Empire Bldg.

Ark., Fort Smith—Hamilton Reames Motors, 209-15 Towson Ave., has begun erection of 1-story, 100x130-ft. sales and service station, brick, tile floor, plate glass fronts; estimated cost \$35,000; install \$4000 equipment.\*

Ark., Jonesboro—The Gulf Refining Co. plans erecting \$10,000 gasoline filling station cor. Huntington and Church St.

Fla., Coral Gables—Coral Gables Airshot Lubrication Co., F. J. O'Leary, Gen. Mgr., 111 Salamanca Ave., will erect filling stations at various locations.

Fla., Jacksonville—Automobile Accessories—Metiart Co., Twenty-first and Talleyrand Ave., incorporated; J. Erskine, J. A. Bocciny.

Fla., Jacksonville—Medical Arts Corp., care Austin Fullerton, 310 W. Church St.; 4-story steel and brick garage, 426-28 Duval St.; accommodate about 100 cars; Jefferson D. Powell and MacDonald Mayer, Asso. Archts., Professional Bldg.; James Stewart & Co., Inc., Contrs., New Barnett Bank Bldg., Jacksonville; 17 E. 42d St., New York, etc. (See Contracts Awarded—Bank and Office.)\*

Fla., Miami—P. A. McNell has permit for \$12,000 addition to storage garage at 44 S. W. Third St.

Fla., Tampa—Interstate Investment Co.,

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



314 Madison St., has permit for erection of \$9000 filling station at Thirteenth and Lafayette St.

Fla., Tampa—Martinez & Gonzalez will erect garage at Michigan and Twenty-second St., 1 story, 75x135 ft., hollow tile and stucco, concrete floors, built-up roof; estimated cost \$30,000; open bids Dec. 20; G. Herbert French, Archt., 21 Southern Bldg. [See Machinery Wanted—Hollow Tile; Metal Doors; Steel Sash and Trim; Wire Glass; Roofing (Composition).]

Ga., Atlanta—Georgia Railway and Power Co. has permit for erection of \$103,000 garage and paint shop at 101-3 Gilmer St., brick and steel construction.

Ky., Louisville—Peoples Transit Co., capital \$50,000, incorporated; Robert L. Page, Louisville Trust Bldg.

Ky., Owensboro—B. M. Logan and H. W. Nall applied for permit for construction of filling and service station cor. Ninth and Frederica St.

La., Monroe—Ben Lieber will erect automobile and office building on S. Grand St.; estimated cost \$75,000; 2 story, 92x125 ft., reinforced concrete and brick, pile foundation, concrete and wood floors, composition roof, steel sash; J. W. Smith, Archt., Ouachita Bank Bldg.; receive bids in January.

La., New Orleans—Fairchild Motor Car Co., 700 St. Charles St., will erect \$25,000 garage and store room at 733 Camp St., 2 story, brick, concrete and wood floors, composition roof, steel sash; Walter Cook Keenan, Archt., Liverpool and London and Globe Bldg.; soon receive bids.

Md., Baltimore—C. F. Kurre of the Kurre Packing Co., 2145 Taylor Ave., will erect 2-story building at Twenty-second and Taylor Ave., 50x100 ft.; first floor for garage, second floor for manufacturing purposes.

Md., Baltimore—Lord Baltimore Filling Station, American Bldg., has permit for 1-story brick building cor. North Ave. and Poplar Grove St., 12x20 ft.; construction by owner.

Md., Baltimore—Elizabeth Albaugh has permit for \$10,000 garage at 1413 W. Lafayette Ave., 1 story, 18x36 ft.; Howard W. Gross, Archt. and Builder, 1633 Moreland Ave.

Miss., Greenwood—Delta Chevrolet Co., capital \$25,000, incorporated; C. A. Pitchford, A. F. Barber.

Mo., Joplin—Cunningham-Marks Oil Co. of Miami, Okla., erect filling station corner Sixth and Wall St.

Mo., Kansas City—Company, of which C. C. Peters, 1228 Santa Fe Rd., is president, planning a 4 or 5 story garage and inter-urban bus station, connection with office building, McGee St. (See Buildings Proposed—Bank and Office.)

Mo., Kansas City—E. G. Barnes Motor Co., N. E. 75th and Broadway, capital \$50,000, incorporated; E. G. Barnes, Jas. F. Pickett, Atty., 207 Westmoreland Bldg.

Mo., Kirksville—Tucker Motor Co., capital \$13,700, incorporated; H. E. Tucker, E. K. Waffle.

Mo., Richmond Heights, St. Louis—Commodore Realty Co., 1031 Commodore Drive, has permit for 2-story service building, 80x120 ft., brick, tar and gravel roof; Vickery Building Co., Contrs.

Mo., St. Louis—F. H. Fitch, 725 Lucas St., has permit for construction of \$12,500 garage; 1-story, 70x105 ft., brick, tar and gravel roof; Roaz Kiel Construction Co., Contrs., Seventh and Locust Sts.\*

Mo., St. Louis—The Gamble Construction Co., 620 Chestnut St., obtained permit for erection of \$175,000 service parts building of the Chevrolet Motor Co. at 3924 N. Union Blvd., 1 story, 162x232 ft., reinforced concrete, brick front; site owned by Buick Manufacturing Co., 3850 N. Union Blvd.

Mo., St. Louis—Beauty Cab Co., capital \$15,000, incorporated; Robert L. Dokes, Ardell Anderson.

Mo., Springfield—Mid-City Motor Co., 810 Boonville Ave., incorporated; A. W. Newton N. C. Shelby—Filling Station—Royster Oil Co., capital \$25,000, incorporated; H. R. Royster, S. S. Royster.

Okla., Atoka—The Atoka Motor Co., capital \$80,000, incorporated; P. P. Williamson, N. W. Williamson.

S. C., Orangeburg—City Motor Co., incorporated; A. B. Bennett, E. S. Roundtree.

Tenn., Knoxville—The Saunders Drive-Yourself System, E. W. Reece, local Mgr., 204 W. Church Ave., plans erecting new building on W. Cumberland St. to be known as "University Branch"; B. L. Chambers, Contr., 625 S. Gay St.

Tenn., Nashville—Blount Motor Co., Inc.,

capital \$25,000, chartered; T. C. Drinnen, L. A. Badgett.

Tenn., Tiptonville—Tiptonville Motor Co., capital \$15,000, incorporated; J. C. Jackson, A. E. Markham.

Tex., Breckenridge—Standard Auto Works, capital \$8000, incorporated; A. G. Chastain, R. W. Chastain.

Tex., Dallas—Automobiles—Central Parking Co., Inc., chartered; Charles L. Sanger, Melrose Court.

Tex., Edinburg—Southtex Motor Co., J. L. Oliver, Mgr., reported, will erect \$80,000 garage, 1 and 2 story, 100x134 ft., roof constructed so that it can be used for parking purposes; Robert L. Vogler, Archt.; soon let contract.

Tex., Houston—Jack Neal-Nash Motors Co., 1304 Lamar St., will occupy garage building now under construction at Austin and Leeland St., 78x128 ft., modern fireproof; Hedrick & Gottlieb, Archts., Post-Dispatch Bldg.

Tex., Houston—See Gas and Oil Enterprises.

Tex., Houston—Ford Motor Co., main plant Detroit, Mich., soon let contract for construction of \$40,000 annex to plant on Harrisburg Blvd., 1 story, 70x267 ft., reinforced concrete and steel, fireproof throughout; use for storage purposes; capacity about 200 cars; plans prepared in Detroit by engineers of the Ford Co.

Tex., Mineral Wells—Seamon Auto and Supply Co., 201 W. Hubbard St., let contract to J. S. Murphy & Co., Mineral Wells, for \$40,000 automobile sales building, 2 story, 100x150 ft., reinforced concrete and brick, cement and terrazzo floors, Johns-Manville composition roof; A. B. Withers, Archt., 103½ Oak St.\*

Tex., Rockport—Magnolia Petroleum Co. establishing service station; total cost about \$12,000.

Va., Roanoke—The Roanoke U-Drive-It Corp., capital \$25,000, chartered; F. E. Dunaney, 617 Virginia Ave.

W. Va., Fairmont—The Fairmont Cadillac Co., incorporated; G. W. Snowden, 506 Morgantown Ave.

### Railway Shops and Terminals

Ky., Paducah—Wisconsin Bridge and Iron Co. has contract for erection of steel for the power house of the new Illinois Central R. R. shops; between 1200 and 1500 tons steel will be used for construction of power house and outside crane-way; Joseph E. Nelson & Sons, 1500 Kentucky Ave., has contract for superstructure; bids for plumbing not yet awarded.\*

Ky., Paris—Louisville and Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, Ky., let contract Roberts & Schaefer Co., 400 N. Michigan Ave., Chicago, Ill., for installation of sand-handling machinery.

Ky., Russell—Chesapeake and Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., reported, construct \$100,000 new steel water tank at terminal yards, to replace present wooden structure.

Tenn., Paris—Louisville and Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, Ky., reported, soon let contract for structural work of new planing mill to be erected at shops, 72x120 ft., brick and steel, wire glass; estimated cost \$75,000.

### Roads, Streets and Paving

Large sums are being expended for roads, streets and paving in connection with Land Development operations. Details will be found under that classification.

#### Proposed Construction

Alabama—State Highway Dept., Montgomery, receives bids Jan. 12 for 5 roads and bridge: Perry County, 16.3 mi. gravel, between Marion and Bibb County line toward Guntersville; Bibb County, 16.5 mi. gravel and chert, Guntersville to Wilton; Baldwin County, bridge and approach over Styx River and 2 mi. sand clay road, between

Florida State line and Loxley; Lamar County, 9.77 mi. gravel, between Vernon and Suligent; Tuscaloosa-Bibb Counties, 4.61 mi. chert, between end of Federal Aid Project No. 120, near Woodstock, and point on Birmingham-Tuscaloosa Highway; W. A. McCalla, State Highway Engr.

Ala., Alabama City—City plans curbs, gutters and sidewalks on about 5 blocks of Kyle Ave. and on First and Second Sts. Address City Clk.

Ala., Birmingham—City Commrs. contemplate paving roadway between Birmingham and Ensley; A. J. Hawkins, City Engr.

Ala., Demopolis—City plans paving Main, Walnut and Jackson Sts. Address City Clk.

Ala., Gadsden—Chattanooga, Gadsden, Birmingham and Lookout Mountain Scenic Highway Assn., incorporated; J. B. Pound, Chattanooga, Tenn., and J. W. Elliott, 711 N. 5th Ave., Knoxville, Tenn., interested; considering completion Lookout Mountain Scenic Highway, from Gadsden to Chattanooga.

Ala., Tuscaloosa—State Highway Comm., Montgomery, Ala., receives bids January 12 for 8.21 mi. Tuscaloosa-Birmingham Highway, Tuscaloosa County; estimated cost about \$300,000.

Florida—State Road Dept., Tallahassee, contemplates paving Road No. 4, between St. Augustine and Bunnell, and Road No. 1, Old Spanish Trail, in Jefferson, Leon and Gadsden Counties; J. L. Cresap, State Highway Engr.

Fla., Jacksonville—Board of Governors, Junior Chamber of Commerce, interested in laying sidewalks along all arterial roadways and streets within city limits.

Fla., Miami—Dade County Commrs. plan resurfacing north side of causeway across Biscayne Bay, connecting Miami with Miami Beach.

Fla., Pensacola—City Commrs. plan 3 mi. grading, paving, curbing and otherwise improving streets in downtown and residential streets; also Bayshore Blvd., from terminus of Gregory St. to Bayview Park; concrete or brick and asphalt. See Financial News—Bond Issues Proposed.

Fla., Tampa—City Comm., Mayor Walls, plans extending Bayshore Blvd., Magnolia to Plant Ave., along bank of Hillsborough Bay; Doyle E. Carlton, City Atty.

Ga., Alma—Bacon County Commrs. of Roads and Revenues, T. J. Townsend, Commr., plan paving highways through Alma southward to Ware County line.

Ga., Atlanta—City, Walter A. Sims, Mayor, plans extending Broad St., Mitchell to Fair; approximate cost \$500,000.

Ga., Atlanta—Fulton County may widen and pave Piedmont Ave., Chattahoochee River to State capital. Address County Commissioners.

Ga., Brunswick—Glynn County Commrs. plan hard surfacing and rebuilding 5 roads, totaling about 10 mi. on St. Simon's Island; Macon-Brunswick Highway, Old Sterling to Wayne County line, road through Buffalo Swamp, etc.; cost \$200,000. See Financial News—Bond Issues Proposed.\*

Ga., Hazlehurst—City, John Rogers, Mayor, receives bids Dec. 21 for about 25,000 sq. yds. two-course concrete sidewalks; plans from W. W. Smith, Clk., and O. H. Lang, Conslt. Engr., Moultrie.

Kentucky—State Highway Comm., Frankfort, receives bids Jan. 7 for 14 roads: Bullitt County, 11.3 mi. grade and drain Shepherdsville-Lebanon Junction, from Shepherdsville to Lebanon Junction; Campbell County, 4 mi. surfacing Augusta-Newport road, from Pendleton County line to California Cross Roads; Green County, 4.9 mi. grade and drain Greensburg-Columbia road, from Green River to Greensburg to near Gresham; Hardin County, 11 mi. grade and drain, Cecelia-Garfield road, Cecelia to Vertrese; Larue County, 4.1 mi. surfacing, Hodgenville-Elizabethtown road, Nolin Creek to Hofgenville to ½ mi. east of Tontieville; Leslie County, 8 mi. grade and drain, Hyden-Hazard road; Logan County, 9.5 mi. grade, drain and surface Russellville-Bowling Green road, Russellville to Auburn.

In McCracken County, 13.3 grade and drain, Paducah-Loveleceville road, Paducah to Ballard County line; Menifee County, 8.6 mi. grade and drain, Frenchburg-Mt. Sterling road, Frenchburg to Montgomery County line; Montgomery County, 3 mi. grade and drain, Mt. Sterling-Frenchburg road, Slate Creek to Menifee County line; Perry County, 4.5 mi. grade, drain and shoulder Hazard-Hyden road, from Midland Trail to Bullsken Creek Bridge, near Finchville, 6.3 grade, drain and surface, from Bullsken Creek Bridge to Louisville-Taylorsville road; Todd County, 8.0 mi. grade, drain and surface, Hopkinsville-Elkton-Russellville road, from end State-maintained

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road, 4.3 mi. east of Fairview to Logan County line, near Daysville; Webster County, 9.4 mi. surfacing, Pooletown-Sebree-Beech Grove road, Pooletown to McLean County line at Eastwood Ferry; E. N. Todd, State Highway Engr.

Kentucky—State Highway Comm., Frankfort, receives bids Feb. 18 for 12 roads: Anderson County, 5.8 mi. grade, drain and surface, Lawrenceburg-Harrodsburg road, Lawrenceburg to Mercer County line; Carlisle County, 4.8 mi. surfacing, Bardwell-Wickliffe road, Bardwell to Ballard County line; Clinton County, 6.6 mi. grade and drain, Albany-Tennessee State line road, Albany to Tennessee State line, near Huntersville; Davies-McLean Counties, 7.2 mi. surfacing, Owensboro-Beech Grove road, St. Joseph's, Davies County to Beech Grove, McLean County; Hickman County, 6.9 mi. surfacing, Clinton-Bardwell road, Clinton to Carlisle County line; Mercer County, 7.8 mi. grade, drain and surface, Harrodsburg-Lawrenceburg road, from end of maintained road 5 mi. north of Harrodsburg to Anderson County line.

In Nicholas County, 2.5 mi. surface, Carlisle-Moorefield road; Muhlenberg County, 6.8 mi. grade and drain, Central City-Russellville road, Central City to Drakesboro; Pike County, 10.7 mi. grade and drain, Pikeville-Whitesburg road, Robinson Creek to 1.25 mi. north of Myra Post Office; Scott County, 7.1 mi. surface Georgetown-Williamstown road, from end of State maintained road 5.8 mi. north of Georgetown to Sadleville road; Washington-Marion Counties, 9 mi. grade, drain and surface Springfield-Lebanon road, Springfield to Lebanon; Wayne County, 6.25 mi. grade and drain, Monticello-Albany road, from point about 5.3 mi. from Monticello to Clinton County line; E. N. Todd, State Highway Engr.

Ky., Hardinsburg—Breckenridge County Court, Judge Davis, plans 4 roads through county; cost \$1,000,000; Stanley Gray, County Clk. See Financial News—Bond Issues Proposed.\*

Ky., Paintsville—Johnson County plans surfacing Mayo Trail through county, cost \$300,000. Address County Commrs. See Financial News—Bond Issues Proposed.

Ky., Prestonsburg—Floyd County plans building Mayo Trail, cost \$100,000. Address County Commrs. See Financial News—Bond Issues Proposed.

La., Baton Rouge—Louisiana Highway Comm., Baton Rouge, approved plans for Chef Menteurs Rigolets Highway as part of federal aid system, and construction of bridges at Chef and Rigolets; W. B. Roberts, State Highway Engr.

La., Cedar Grove—Town, W. G. McCord, Clk., receives bids December 27 to grade, pave curb, drain and otherwise improve Seventieth St., Atkins to Linwood, and Division St., Sixty-eighth to Seventieth; 4493 cu. yd., and 2504 sq. yd. 6-in. reinforced concrete pavement, 1-2-3 mix, 5099 lin. ft. combined curb and gutter, 1-2-3 mix, 2381 lin. ft. 4x6x12 in. plain curb, 1677 cu. yd. excavation; two 30-ft. drop covers, 1 manhole; plans from Charles D. Evans, Consult. Engrs., Shreveport.\*

La., Rayville—Louisiana Highway Comm., Baton Rouge, received low bid from I. M. Goldberg, Abbeville, \$19,282, for 3.201 mi. gravel Alto-Columbia Highway, Richland Parish; Monroe Sand & Gravel Co., Ouachita National Bank Bldg., Monroe, low bidder on 4514 cu. yd. washed gravel.\*

Miss., Grenada—Grenada County Board of Supvrs. receives bids Jan. 4 for 10 mi. gravel between Grenada and Calhoun City; plans from H. C. Dietzer, State Highway Engr., Jackson.

Miss., Gulfport—Harrison County, Eustia McManus, Clk., received low bids for 5 roads and bridge in Beat No. 4: Southern Paving Construction Co., Union St., Spartanburg, S. C., Biloxi-Ocean Springs road, 2-in. Warrenite bitulithic, \$44,624; 2-in. asphaltic concrete, 41,604; 3-in. sheet asphalt, \$44,772; concrete, \$47,616; West Beach-Pass Christian road, C. F. Lytle, Sioux City, Iowa, concrete, \$13,523; Southern Paving Construction Co., Warrenite bitulithic, \$13,624; Twenty-eighth St., 3-in. sheet asphalt, Baird-Eller Construction Co., Nichol Bldg., Nashville, Tenn., \$26,496; East Beach, Gulfport, 3-in. sheet asphalt, Baird-Eller Co., \$83,292; 2-in. Warrenite bitulithic, Southern Paving Construction Co., \$95,697; East Howard, Biloxi, Warrenite bitulithic, Southern Paving Construction Co., \$48,625; bridge in Beat No. 4, Geo. S. Kelly, Gulfport.\*

Miss., Jackson—Hinds County Board of Supvrs. plans completing road building. See Financial News—Bond Issues Proposed.\*

Miss., Meridian—John H. Blanks, Realtor, Oakhurst Subdivision, will let contract soon for concrete sidewalks and gravel streets in subdivision.

Miss., Pascagoula—Jackson County Board

of Supvrs. plans completing concrete road from Ocean Springs to Harrison County line, and construct new fill from Ft. Bayou Bridge to foot of hill, Supvrs. Dist. No. 4, cost \$65,000. See Financial News—Bond Issues Proposed.\*

Miss., Vicksburg—Warren County Board of Supvrs. receives bids Jan. 3 for permanent improvement of National Cemetery Road; \$50,000 available; T. P. Mackey, Pres.\*

Mo., Mexico—City plans paving Cole St., Liberty to Promenade, Promenade to Jackson, Jackson to Monroe, and Monroe to Love St.; Barbary Lane, Monroe to Love. Address City Clerk.

Mo., St. Louis—Board of Public Service plans widening Vandeventer St. to 70 ft. between Market St. and Washington Blvd.

Oklahoma—State Highway Comm., Oklahoma City, receives bids December 21 for 11 roads and 10 bridges: Osage County, 14 mi. grade and drain Highway No. 11, Barnsdall to Tulsa County line; Grady County, bridge across Washita River, east of Chickasha, Highways Nos. 7 and 8, replace present bridge; Payne County, bridge across Cimarron River, Highway No. 33, west of Cushing; Logan County, 13 mi. grade and drain, Highway No. 33, Guthrie to Coyle; Stephens County, 14 mi. grade and drain, east of Comanche; Major County, bridge at Cleo, Highway No. 8; Canadian County, 1½ mi. grade and drain, Highway No. 2, east of El Reno.

In Alfalfa County, 7 mi. grade and drain, Highways No. 1, 8 and 11, south of Cherokee; Pawnee County, 5½ mi. grade and drain, Highway No. 11, east of Pawnee; Payne County, 24 mi. grade, Highways Nos. 1 and 11, east of Stillwater; 24 mi. grade and drain, Highway No. 33, Cushing to Perkins; Cimarron County, bridge across Cimarron River, north of Boise City; Kingfisher County, overhead crossing over Rock Island R. R., Highway No. 2, north of Kingfisher; Pushmataha County, 3 bridges on Highway No. 10, near road construction camp; Craig County, 6 mi. grade and drain, Highway No. 6, south of Vinita; Sequoyah County, 12 mi. grade and drain, Highway No. 1, Sallisaw to Muldrow; 2 bridges, Highway No. 1, west of Vian; Grant County, 16 mi. grade and drain, Highway No. 2, Medford to Kansas State line.

Okl., Cherokee—State Highway Comm., Oklahoma City, Cy. Avery, Chmn., receives bids Dec. 21 for 20 mi. paving in Alfalfa County; J. M. Page, State Highway Engr.

S. C., Charleston—Commrs. of Middle Coastal Highway Dist., Jenkins M. Robertson, Chmn., may let contracts early in Jan. to pave about 15 mi. road from Hollywood to Colleton County line at Edisto River, Charleston County, and sections in Berkeley County.

S. C., Florence—City, Mayor Gilbert, plans laying sidewalks. See Financial News—Bond Issues Proposed.

Tenn., Jamestown—Fentress County plans building lateral roads to connect with York Dixie Highway, through county, north to south; including road from Overton County line to Rugby, Morgan County, via Boatland, Helena, Jamestown, Allardt and Armathwaite. Address County Commrs.

Tenn., Knoxville—City, Frederick A. Ault, Recorder, plans expending about \$500,000 for several miles streets and avenues paving and additional miles sidewalks, curbs and gutters in various improvement districts.

Tenn., Memphis—City Comm. plans opening North Cleveland St. from Poplar Ave. to North Parkway and paving extension with asphalt; plans receiving bids to pave 2700 ft. Barksdale St. with gravel; Will A. Fowler, City Engr.

Texas—State Highway Comm., Eugene T. Smith, Chmn., Austin, receives bids Dec. 20 for 10 roads: Ellis County, 5.4 mi. grading and preparation of base on new alignment and surfacing 18 ft. wide, with .5 gal. per sq. yd., asphalt State Highway No. 68, between Midlothian and Dallas County line, 7377 cu. yd. excavation and borrow, 57,024 sq. yd. asphalt surface treatment; Falls County, 7.65 mi. resurfacing and graveling State Highway No. 44 north from Rosebud; Johnson County, 1.70 mi. grading and drainage structures, State Highway No. 10, Parker County line to Hood County line, 17,070 cu. yd. excavation and borrow, 12,004 lbs. reinforcing steel; Parker County, 5.47 mi. grading and drainage structures, State Highway No. 10, Tarrant County line to Johnson County line; Hardeman County, 7.762 mi. grading and drainage structures, State Highway No. 5, from Quanah east, 7.762 mi.

In San Jacinto County, 5.871 mi. grading and drainage structures, State Highway No. 35, Polk County line to Shepherd, 115,272 cu. yd. excavation and borrow, 16,251 lbs. reinforcing steel, 2080 sq. yd. Amiesite or

bituminous concrete pavement; Jim Wells County, 9.788 mi. grading and drainage structures, State Highway No. 12-A, Alice, west to Duval County line, 116,083 cu. yd. excavation and borrow, 95,817 lbs. reinforcing steel; Walker County, 15,359 mi. reinforced concrete pavement and guard fence, State Highway No. 19, Huntsville to Montgomery County line, 162,199 sq. yd. concrete pavement, 551,689 lbs. reinforcing steel; Terrell County, 5.231 mi. grading and drainage structure, State Highway No. 3, from Val Verde County line west, 74,315 cu. yd. excavation and borrow, 20,083 lbs. reinforcing steel; Grimes County, 6.152 mi. grading and drainage structures, State Highway No. 6, from point 4 mi. south of Navasota to Brazos County line, 36,694 cu. yd. excavation and borrow, 52,008 lbs. reinforcing steel; plans on file and from County Engrs.; A. C. Love, State Highway Engr.

Tex., Beaumont—Jefferson County, B. V. Johnson, County Judge, plans boulevard between Beaumont and Port Arthur and widening present Beaumont-Port Arthur road to 24 ft. crushed rock or gravel surface with asphalt. See Financial News—Bond Issues Proposed.\*

Tex., Cotulla—City, J. H. Gallman, Sec., receives bids Dec. 20 for 9900 lin. ft. concrete curb and gutter, 5800 cu. yd. gravel base; 29,000 sq. yd. asphalt surfacing, 2700 cu. yd. excavation; plans from Nagle, Witt & Rollins Engineering Co., Cotulla; J. W. Lacey, Mayor.

Tex., Fort Worth—City, O. E. Carr, Mgr., plans expending over \$100,000 to pave about 200 skips in streets and avenues already laid.

Tex., Galveston—City, Jack E. Pearce, Mayor, may widen Market St. from Nineteenth to Twenty-sixth St.

Tex., Houston—City, O. F. Holcombe, Mayor, received low bid from A. M. Arnold & Co., Elder and Sumner St., at \$19,000 for permanent paving on Live Oak St.

Tex., Luling—City receives bids after December 13 for about 8 blocks paving, cost \$50,000. Address The Mayor.

Tex., Tyler—City Comm. will pave Bow, Center and Fan St. and Boren Ave.

Tex., Victoria—State Highway Comm., Eugene T. Smith, Chmn., Austin, receives bids Dec. 20 for 8.9 mi. grading and drainage structures, Highway No. 29; A. C. Love, State Highway Engr.

Virginia—State Highway Comm., H. G. Shirley, Chmn., Richmond, receives bids Dec. 29 for 3 roads and 7 bridges: Project F-221-B, 3 mi. concrete; S-335-B, 1.8 mi. grading; F-420-C, 10 mi. concrete; S-406-EFGH, 4 bridges; F-455-B, bridge over Nottaway River; F-455-C, bridge over Waqua Creek; S-481, bridge over Wallen's Creek; plans from C. S. Mullen, Ch. Engr.

Va., Bristol—City, John D. Keeler, Mgr., plans completing street through underpass under tracks of Southern Ry. at Piedmont Ave. See Financial News—Bond Issues Proposed.

Va., Richmond—City, R. Keith Compton, Director of Public Works, contemplates smooth paving Main and Carey Sts.

Va., Roanoke—City, City Mgr. Hunter, considering establishing roadway from Barbour Heights to Colonial Heights.

#### Contracts Awarded

Ala., Cullman—State Highway Comm., Montgomery, let contract to Texas Road Co., Dallas, Tex., at \$74,000 for 7 mi. water-bound macadam base, Cullman County, between Cullman and Garden City.\*

Ark., Fayetteville—City, Allan M. Wilson, Mayor, let contract to C. A. Monroe Construction Co., St. Louis, to pave annex to South College Ave.

Ark., Little Rock—Commrs. Little Rock Highland Road Improvement Dist. No. 24, let contract to M. D. L. Cook, Home Insurance Bldg., at \$88,740, for 34 blocks Warrenite asphalt on Kanis St.; to Grady Garms at \$80,256 for 30 blocks on Midget and Terry St.

Ark., Little Rock—Commrs. of Street Improvement Dist. No. 430 let contract to D. C. Horton to pave 6 streets, including West Seventh, Applian Way, etc., with vibrolithic concrete surface between business district of Little Rock and residence section of Pulaski Heights; contract to lay curb and gutter in Curb and Gutter Improvement Dist. No. 429, to same contractor, at total cost of \$150,000.

Fla., DeLand—Volusia County Commrs., Samuel D. Jordan, Clk., let contract to Deen-Yarborough Co., Winter Haven, at about \$310,000, for 14.6 mi. 15 in. rock base, slag and asphalt surface, 6 in. concrete curb, North End road.\*

Fla., Orlando—City Comm., J. A. Stinson, Clk., let contract to E. R. Favor, Winter

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Park, at \$12,000, to hard-surface with 1 in. Kentucky asphalt Livingston Ave., between Orange Ave. and new municipal auditorium; Cox & Bryson, 311 Smith Bldg., at about \$125,000, for 30 mi. sidewalks in 5 mi. stretches.\*

Fla., Vero Beach—Commrs. of Atlantic Gulf Special Road and Bridge Dist., D. C. Cox, Chmn., let contract to C. F. Walker, Okeechobee, at \$145,000 for grading, bridge building and drainage Sec. No. 2, Vero Beach-Tampa crossstate highway.

Ga., Cartersville—City, H. C. Nelson, Mayor, let contract to Sam E. Finley, 212 W. North Ave., Atlanta, at about \$7500 for 1 mi. 24-ft. 5-in. concrete base, 2-in. asphalt top paving, stone curbing, concrete sidewalks.\*

Ga., Louisville—State Highway Dept., East Point, let contract to Clark Construction Co., Louisville, for 18.93 mi. grading, Louisville-Swainsboro road.\*

Ga., Montezuma—Whitley Construction Co., McRae, has contract for 40-ft. street paving in business section and 30-ft. paving in residential section.

La., Alexandria—City Comm. let contract to C. J. Pilbrim to pave sidewalks on river side Third St., Lee to Bellier.\*

La., Covington—Suprv. Boards of Sub-Road Dist. No. 1 of Road Dist. No. 3 and Road Dist. No. 4, St. Tammany Parish, John S. Polivent, Chmn., let contract to Picard Construction Co., New Orleans, at \$165,000 for 5 sections of roads totalling about 28.3 mi. in districts.\*

La., Minden—Webster Parish Police Jury let contract to Drew Brothers, Minden, at \$60,559 for 2 sections road, totalling 8.6 mi., 28-ft. gravel highway, Benton-Haynesville highway, from Bossier Webster Parish line to Dorcheat road, concrete box culverts, timber pile bridges, 16,500 yds. gravel surfacing, 104,800 cu. yd. excavation and borrow, 29,339 lbs. reinforcing steel.\*

La., Vidalia—Concordia Parish Police Jury let contract for 2 roads: Deer Park road, C. W. McKelthen, Fondren St., Jackson, Miss.; Lake St. John road, H. A. Turner, Ferriday.

Miss., Brookhaven—City, Perry A. Coker, Chmn., let contract to Dunn Construction Co., Chamber of Commerce Bldg., Birmingham, Ala., for Warrenite bitulithic paving on 3 business blocks, east side of railroad.\*

Miss., Jackson—Hinds County Board of Suprvs. let contract to John L. Humbard Construction Co., at about \$468,000 for 22 mi. 18-ft. plain concrete road between Tugaloo and Terry.\*

Mo., Moberly—City, G. F. Rothwell, Chmn., let contract to Lynch McDonald Construction Co., at \$24,561, to widen, resurface with smiesite and lay concrete curb on Rollins St.\*

Mo., Nevada—Thos. Martin & Sons has contract to pave Nevada road with bituminous macadam; Address Vernon County Comrs.

Okla., Miami—State Highway Comm., Oklahoma City, let contract to Charles Lee, Berice, to gravel State Highway No. 7, from Afton to Craig County line.

S. C., Spartanburg—E. Z. White, 585 Otis Blvd., and A. C. Willard, 611 Rutledge St., Promoters, Connecticut Heights Subdivision, let contract to W. C. Willard & Son, Spartanburg, to lay out and topsoil 3 streets in residential subdivision.

Tex., Amarillo—City, Jeff D. Bartlett, Mgr., let contract to El Paso Bitulithic Co., 160 N. Piedras St., El Paso, for 4496 yds. 3-in. brick on 5-in. concrete paving, curb and gutter; 933 yds. paving, curb and gutter; 1835 yds. 3-in. brick on 4-in. concrete base paving, curb and gutter, \$6258.

Tex., Amarillo—City, Jeff D. Bartlett, Mayor, let contract to El Paso Bitulithic Co., 160 N. Piedras St., El Paso, for street paving; 4106 yds. 3-in. brick on 4-in. concrete paving, curb and gutter, \$13,950; 4,129 yds. 3-in. brick, 5-in. concrete base, \$13,953; 3,531 yds. 3-in. brick, 5-in. concrete base paving, curb and gutter, \$11,946.

Tex., Corpus Christi—City let contract to Stewart & Eichelberger for 1-in. cold-rolled asphalt and 7-in. Realitis limestone base paving on certain streets.

Tex., Dallas—City reported let contract to Austin Bridge Co., 1815 Clarence St., at \$1.80 per yd. for 6-in. reinforced concrete paving on Sycamore St.

Tex., Galveston—Galveston County, J. C. Romberg, County Judge, let contract to J. W. Zempter & Co., 22-4 B St., at \$147,372, for Sec. 2 on Galveston-Houston highway.

Tex., Pampa—Gray County, T. M. Wolfe, County Judge, plans hard surfacing on main highways; cost \$1,200,000. See Financial News—Bond Issues Proposed.\*

Tex., San Antonio—Bexar County, Augustus McCloskey, County Judge, let contract to Alamo Paving Co., 321 Dawson St., at \$11,705, for natural limestone rock asphalt surface treatment, S. Flores Road, from new Medina River Bridge to Campbellton Road, Precinct No. 1.

W. Va., St. Albans—City, F. D. Burgess, Mgr., let contract to Baler & Hawley, St. Albans, for about 600 sq. yd. 6-in. concrete paving.\*

## Sewer Construction

Large sums are being expended for sewage facilities in connection with Land Development operations. Details will be found under that classification.

Ala., Tuscaloosa—J. A. Taylor, reported, has contract for \$20,000 drainage sewer.\*

Ark., Little Rock—McEachin and McEachin, Home Insurance Bldg., has contract at \$73,860 for sewer.

D. C., Washington—District Commrs. receives bids Dec. 21 for sewers. (See Machinery Wanted—Sewers.)

Fla., Crestview—See Water Works.

Fla., Orlando—City, J. A. Stinson, Chmn., receives bids Dec. 22 for installing sewer along Lake View Ave. (See Machinery Wanted—Sewers.)

Fla., Stuart—Atkins Dredging Co. has contract at \$75,288 for Frazier Creek work.

La., Ruston—City receives bids January 4 for construction of approximately 30,000 ft. of 8 and 10 in. sewer mains and 3 disposal plants; E. T. Archer & Co., Engrs., City Bank Bldg., Shreveport. (See Machinery Wanted—Sewers.)

Miss., Macon—City receives bids Jan. 4 for sanitary sewer system. (See Machinery Wanted—Sewers.)

Mo., Cape Girardeau—City will probably construct sanitary and storm sewer on N. Main St.

Mo., Chillicothe—City receives bids Dec. 27 for sewer in Sewer District No. 9. (See Machinery Wanted—Sewers.)

Mo., Jefferson City—City, reported, received low bid from Apsland Construction Co., Tecumseh, for construction of sewer system; Black & Veatch, Engrs., Mutual Bldg., Kansas City.

Mo., New Madrid—See Water Works.

N. C., Franklin—City defeated sewer bonds. See Financial News—Bond Issues Proposed.\*

N. C., Thomasville—City, J. Walter Lambeth, Mayor, receives bids Dec. 15 for 3800 ft. of 18-in. sewer pipe. [See Machinery Wanted—Pipe (Sewer).]

Okla., Bartlesville—City reported let contract to Hamilton Construction Co. for sewer; J. E. McCormick, City Engr.

Okla., El Reno—City plans voting on bonds for sewers, park and cemetery. Address The Mayor.

Okla., Enid—City rejected bid for cast-iron pipe; F. C. Magruder, Engr.

Okla., Pauls Valley—City defeated bond election; W. J. Harris, Chmn.\*

Okla., Ponca City—City reported let contract to Woodward Construction Co. at \$27,936 for sewers.

Okla., Tulsa—H. L. Cannady Co., 1116 S. Lewis St., Tulsa, has contract at \$162,510 for sewer system.

Tex., Denton—City plans improvement to sewer system; H. T. Brewster, City Engr.

Tex., Houston—Charles K. Horton, 2202 Clay St., low bidder for storm and sanitary sewers; J. C. McVea, Engr.

Tex., Wichita Falls—James Contracting Co., 805 Trunk St., Dallas, reported has contract for sewers; F. M. Rugeley, City Engr.

W. Va., East Rainelle, P. O. Rainelle—Town plans installing sewer system; will vote on \$13,400 bonds; W. O. Walker, Recorder.

W. Va., Wheeling—The J. N. Chester Engineers, Union Bank Bldg., Pittsburgh, Pa., selected by City Council to make survey of sewer system.

## Telephone Systems

Tenn., Paris—Southern Bell Telephone and Telegraph Co., main office Atlanta, Ga., reported appropriated about \$10,000 to enlarge local facilities.

## Textile Mills

Ala., Manchester—W. V. Dodd, Jasper, reported negotiating with New England capitalists for establishment of textile mill.

Ark., Warren—Chamber of Commerce, C. J. Mansfield and others reported interested in establishment of textile mill.

Ga., Acworth—Unique Knitting Co., Emerald and Westmoreland Sts., Philadelphia, Pa., advises company is erecting 2-story building, 165 ft. long and 65 ft. wide; general contractor is James Sprague of Acworth; plant will be equipped with machinery for manufacture of sport hose; will be in operation about March 1.

Ga., Athens—Athens Mfg. Co. increased capital, \$400,000 to \$450,000.

Ga., Gainesville—Chicopee Mfg. Co., Chicopee Falls, Mass., reported let contract through Frank R. Henry & Co., to David Lupton's Sons Co., Allegheny Ave. and Tulip St., Philadelphia, Pa., for steel doors, sash and skylights for mill; J. E. Sirrine & Co., Engrs., Greenville, S. C.\*

La., Shreveport—L. H. Gilmer Co., Cottman and Keystone Sts., Philadelphia, Pa., reported, let contract to Saco-Lowell Shops, 1 Federal St., Boston, Mass., for equipment for mill now under construction; including 5200 spindle equipments and looms; first unit of mill will be 153x393 ft., with warehouse and opening room 86x120 ft., both reinforced concrete and standard mill construction; Park A. Dallis, Archt., Candler Bldg., Atlanta, Ga.; LaGrange Lumber and Supply Co., Lagrange, Ga., Gen. Contrs.\*

Md., Cumberland—American Cellulose and Chemical Mfg. Co., Ltd., let contracts to Cumberland Contracting Co. for general work and to George Hazelwood for dye plant extensions; will extend water lines; install sprinkler system.\*

Tenn., Kingsport—Pyle Brothers, reported, has contract for addition to Kingsport Hosiery Mills; 86x92 ft.; 1 story with elevated middle roof for light; brick and steel; steel columns; cost \$150,000.

Tex., San Marcos—San Marcos Cotton Mills, reported, granted permission by State Department at Austin for sale of \$350,000 stock for completing cotton mills and installing machinery; P. M. Keller in charge of construction work.

Va., South Boston—Halifax Cotton Mills, W. A. McCanness, Pres., reported to establish towel plant and enlarge present damask mill.

Va., Charlottesville—Titus Blatter & Co., 1625 Fifth Ave., New York City, reported to establish plant for manufacturing cretonnes and draperies; first unit to be begun in Jan., will be 150x232 ft.; cost \$80,000; Lockwood, Greene & Co., New York, are engineers for first unit.

Va., Petersburg—United States Silk Knitting Mills, Inc., South Langhorne, Pa., reported to establish plant to be known as Virginia Silk Hosiery Co., Inc.; will ship some machinery from main plant.

## Water Works

Large sums are being expended for water works in connection with Land Development operations. Details will be found under that classification.

Ark., Blytheville—F. G. Proutt, Rand Bldg., Memphis, Tenn., reported has contract for improvements to water works system.

Fla., Crestview—City has sold bonds and plans installation of water and sewerage system. Address The Mayor.

Fla., Fernandina—See Electric Light and Power Plants.

Ga., Edison—See Electric Light and Power Plants.

Ga., Macon—City, Walter A. Sims, Mayor, reported plans installing 2 automatic stokers, etc., cost \$190,000, for water works; will soon call for bids; also for 30-in. water main to be constructed at West End.\*

La., Carencro—City reported let contract to A. G. Mouton, Lafayette, for motor-driven air compressor and centrifugal pump.

La., Winnfield—Town, H. T. Willis, Chmn., contemplates voting on \$150,000 bonds for sewerage system and water works extensions; Charles D. Evans, Consult. Engrs., Levy Bldg., Shreveport.

Md., Annapolis—Bureau of Yards and Docks, Navy Dept., Washington, D. C., receives bids Dec. 22 for deferriation plant at Annapolis. (See Machinery Wanted—Water Works.)

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Miss., Natchez—Layne-Central Co., Memphis, Tenn., has contract for 2 new wells and to install their centrifugal pumps in these 2 wells and an additional pump in one of present city wells; Dayton-Dowd Co., Quincy, Ill., through Southern representative, L. S. Vallely & Co., Whitney Annex, New Orleans, La., has contract for 2 surface centrifugal pumps of 750 and 1000 g.p.m. capacity; Paul C. Klyce, Resident Engr.\*

Mo., New Madrid—City voted \$50,000 bonds for water and sewer system. Address The Mayor.\*

Mo., Springfield—George F. West, Portland, Me., Pres. of Springfield City Water Co., reported plans improvements to water works.

N. C., Shelby—Town plans water works improvement. See Financial News—Bond Issues Proposed.

Okla., Webb City—Edward Gantt, 1116 W. Main St., Oklahoma City, is preparing plans for \$55,000 water works system.\*

Tenn., Crossville—City voted \$100,000 water works bonds. Address The Mayor.\*

Tenn., Knoxville—City, Col. F. W. Albert, Engr. of Water Works Bureau, receives bids Dec. 21 for 60,000 ft. of cast-iron pipe for water works.

Tex., Houston—Chas. K. Horton, 2202 Clay St., low bidder for water pipe and water main; J. C. McVea, Engr.

Tex., Trent—Firmen & Johnson, Dallas, reported has contract at \$30,000 for water works system.

Tex., Turkey—Jordan Construction Co., Plainview, planning water works.

Tex., Waco—City Comm. authorized issuance of \$1,000,000 Lake Bosque bonds; will soon receive bids for 600 gal. pumper at East Waco fire station; E. E. McAdams, City Mgr.\*

Va., Pulaski—Town Council authorized auxiliary water supply system for town; construct pumping station on Peak Creek.

Va., Roanoke—Roanoke Water Works Co. received low bid from W. W. Boxley Co., Boxley Bldg., for construction of masonry dam 90 ft. high at mouth of Carvin's Cove, 7 miles from city; form reservoir with surface area of 600 acres, with total capacity of 6,500,000,000 gals. of which 4,500,000,000 gals. is available by gravity; will contain about 18,000 cu. yds. masonry and will take about 24 months to build; center of structure will have overflow section; Robert E. Wysor, Dublin, Va., is resident engineer of construction; plans and specifications by Sanborn & Bogart, Consult. Engrs., 30 Church St., New York.

Va., South Boston—Town Council ordered 10-in. water main laid from Edmunds St. to reservoir, and from Halifax Cotton Mills to pumping station; 1 mile of 10-in. main with fittings; E. R. Farmer, City Engr.

### Woodworking Plants

Ga., Acworth—R. J. Carruth of Acworth interested in proposed wood finishing plant to be established in former buildings of the Southern Cotton Oil Co.

Md., Baltimore—Lanham Hardwood Flooring Co., P. B. Lanham, Louisville, Ky., advises: "Acquired site on Boarman Ave., between Sanborn Ave. and W. M. Railroad; no plans completed."

Miss., Meridian—Furniture—Morgan-Hardwood Co., capital \$200,000, incorporated; Monroe Morgan, C. N. Little; acquired the Baxter-Hardwood Co.; install new and modern equipment, increasing output; manufacture furniture dimensions, standard hardwood parts for chairs, tables, beds, etc.

Mo., Williamsburg—Walcott and Bedwell Handle Co., capital \$20,000, incorporated; Jas. L. Walcott, Perry R. Bedwell, Bunker, Mo.

Tex., Jasper—Jasper Veneer and Manufacturing Co., L. H. Metz, Mgr., begun erection of new plant, galvanized iron construction, installing machinery; daily output 20,000 ft. veneer and wood pkg.\*

Va., Emporia—Wood Products—Waterproof Plywood Corp., R. W. Little, Sec., purchased 100x200-ft. building; install \$15,000 equipment for manufacture of panels and plywood, daily output 20,000 sq. ft.; machinery purchased.

## FIRE DAMAGE

Ala., Athens—Plant of Athens Warehouse & Storage Co.; loss \$100,000.

Ala., Dothan—Shulman's Bakery building,

loss \$20,000; owned by Amiel McKinzie, New York.

Ala., Huntsville—S. W. Fleming's residence, Whitesburg pike; loss \$30,000.

Ala., Montgomery—Building owned by Mrs. J. W. Cook, 462 S. Court St., and occupied by Well Brothers Cotton Co., American Express Co., Beers Printing Co. and Rice Mercantile Co.; loss \$75,000 to \$100,000.

Ark., Danville—J. B. Choate's general store, Ladd & Pledger's store; loss \$37,000.

Ark., Harrison—Store of Clarence Campbell, at Elmwood.

Ark., Lunsford—Four dwellings owned by Taylor Bros. and Clyde Cash; loss \$10,000.

Ark., Pine Bluff—Storage sheds of the Peers-McGone Spoke Factory on W. Sixth St.; loss \$25,000.

Ga., Hebardsville—Wacona Consolidated School building; loss \$40,000. Address Ware County Board of Education, Waycross.

Ga., Pembroke—Southern Lumber Co.'s yard; loss \$60,000; owned by Thomas and James A. Morgan, 1919 Bull St., Savannah, Ga.

Ky., Lebanon—Main auditorium of United Presbyterian Church; loss \$20,000. Address the Pastor.

La., Baton Rouge—Four buildings on Louisiana Ave., owned by Ed. Wax, Sr.

La., Denham Springs—Allen Brothers' store; loss \$8000.

La., Monroe—Building occupied by the Taylor-Nash Automobile Co., 840 S. Grand St.; loss between \$15,000 and \$20,000.

Md., Olney—"Homeland," residence of L. C. Probert, Supt., Washington Bureau, Associated Press; \$20,000.

Miss., Durant—The Illinois Central R. R. Co.'s coal chute; loss \$50,000.

Miss., Hattiesburg—Wiesenberg store, Millheim Co.'s store; loss \$50,000.

N. C., Charlotte—Building on the Frank A. Cochran dairy farm; loss between \$8000 and \$10,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### Association and Fraternal

Ala., Gadsden—Benevolent Order of National Defenders plans home and school for widows and orphans on proposed Lookout Mountain Scenic Highway. Address J. W. Elliott, Pres., International Travelers Bureau and Managing Director of above order, 711 N. Fifth St., Knoxville, Tenn.

Miss., Greenville—Young Men's Christian Assn., B. L. Burford, Gen. Sec., erect \$21,000 building; frame and stucco, 3 stories in front, 75x134 ft., hardwood floor in gymnasium, asbestos roof, swimming pool; furnishings, equipment, etc., \$5000; L. W. Lathrop, Archt., Weinberg Bldg. See Machinery Wanted.\*

Tex., San Antonio—Young Men's Hebrew Assn., care O. Wolf, 214 Gunter Bldg., contemplates \$100,000 reinforced concrete and brick building.

Va., New Market—Hines Memorial Pythian Home of Virginia, Walter Sibert, Sec., Board of Governors, 31-32 Nussbaum Bldg., Norfolk, have plans by J. R. Mims, Luray, ready about Jan. 1 for bids on repairing Colonial mansion on site and erecting additional buildings; bids to be opened about Jan. 15; cost \$25,000; 3 stories, 30x50 ft., brick wall, reinforced concrete floor construction, hardwood and composition floors, concrete and stone foundation, steam heat, city electric service.\*

#### Bank and Office

Fla., Tallahassee—Exchange Bank, C. L. Mizell, Pres., erect 5-story bank and office building.

Md., Baltimore—Sam'l. C. Applefeld, 2301 Tioga Place, erect 5-story and basement building, 221 W. Baltimore St.; 17x97.6 ft., reinforced concrete; Stanislaus Russell, Archt., 11 E. Lexington St., receiving bids.

Md., Baltimore—Real Estate Board of Baltimore, C. Philip Pitt, Sec., 7 St. Paul St., contemplates office building, 5 or 6 stories, probably mill construction faced with limestone.

Miss., Jackson—First-Capitol Realty Co., Paul Chambers, member, Capitol Natl. Bank Bldg., has low bid at \$248,000 from S. W. Leard, North Blvd., Baton Rouge, for fire-

N. C., Clinton—School building at Cooper; address Sampson County Board of Education.

N. C., Concord—School building at Bethel, in No. 10 township; address Prof. J. B. Robertson, Supt., Cabarrus County schools.

N. C., Hillsboro—R. E. Bivens' residence near Hillsboro.

Okla., Ada—Residences of Robt. Heatley and C. E. Newsome and adjoining dwelling.

Okla., Cowlington—Cotton house of Dunklin-Overstreet Gln.

Okla., Durant—Gln owned by Ferguson Seed Co., Sherman, Tex.; loss \$20,000.

S. C., Kershaw—High school building; loss \$50,000. Address School Board.

Tenn., Nashville—Building at 335 Public Square, occupied by the Railroad Wreckage Co. and Doll Hospital and adjoining property; loss \$80,000.

Tex., Dallas—Bingo Manufacturing Co.'s plant (Food Products), 107 Hord St.; loss \$40,000; T. T. Price, Gen. Mgr.

Tex., Frost—Gin and cotton house of J. L. Mitchell.

Tex., Gilmer—Clarence Tucker's residence at Olive Branch near Gilmer.

Tex., Greenville—Mrs. Lee Ablowich's residence on Wellington St.

Tex., Houston—Seaport Grain Co.'s warehouse, stock and machinery at 817 Sampson St.; loss \$30,000.

Tex., Lufkin—Tyler Hotel, operated by C. J. Dyer.

Tex., Marlin—Residences of J. J. Gallagher and P. S. Summers.

Tex., Mexia—Roy Flynn's residence; loss \$10,000.

Tex., Valdosta—General store of DeWitt Emerson.

Va., Bedford—Municipal building; loss \$30,000. Address City Commission.

Va., Suffolk—Plant of Driver Cotton Gin Co., located near Driver; loss \$8000.

Va., Wytheville—Robt. Eversole's residence, North St. near Third St.

proof office building, Pearl and Southwest Sts.; Claude H. Lindsley, Archt., Lamar Life Bldg., Jackson; Gardner & Howe, Struct. Engrs., Porter Bldg., Memphis, Tenn.\*

Mo., Kansas City—Company, of which C. C. Peters, 1228 Santa Fe Rd., is president, considers erecting 10-story office building, 5- and 4-story garage and interurban bus station on McGee St., north of Tenth St.; cost about \$3,000,000; tentative plans by Wight & Wight, First National Bank Bldg.

N. C., Greensboro—Roy C. Millikan, Southern Life Bldg., erect \$50,000 arcade office building, Stafford Place; 2 stories and basement, limestone front, running ice water; Jos. J. Sawyer, Archt., Jefferson Standard Bldg., completing plans.

Okla., Tulsa—Tulsa Medical Society, Dr. Victor Allen, member, Palace Bldg., having plans drawn by A. M. Atkinson, 218 Mid-Continent Bldg., for \$800,000 Medical Arts Bldg., Sixth St. and Boulder Ave.; 12 stories, first unit 60x140 ft., red brick or white stone, steel and reinforced concrete, ambulatory elevators, X-ray electrical wiring system, laboratories, compressed-air compartments, operating sections, supply depts., clubrooms, drug store, etc.\*

Okla., Tulsa—Waite Phillips, Atlas Life Bldg., reported erect 20-story office building, Fifth St. and Boston Ave.

Tex., Beaumont—American National Bank, Ed. Stedman, Chmn., Bldg. Comm., receives bids Dec. 28 for fireproof bank and office building, Orleans and Bowie Sts.; steel, reinforced concrete, brick and stone, 12 stories, 75x100 ft.; cost \$600,000; alternate bids on 10-story structure; J. Ruskin Bailey, Archt., 1606 Main St., Houston; Tisdale, Stone & Pinson, Asso. Archts., 410 Ind. Life Bldg., Nashville, Tenn.; H. M. Sanford, Struct. Engr., 440 West Bldg., Houston.\*

Tex., McAllen—E. M. Frisby has permit for office building.

Va., Carson—Bank of Carson, Inc., erect \$10,000 bank building to replace burned structure; plans not selected; gray pressed brick, stone columns, 2 stories, 30x50 ft., brick and concrete foundation, fireproof roof, steam heat; furnishings equipment, etc., \$7000. See Machinery Wanted.\*

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



## Churches

Ala., Albany—Ninth Street Methodist Church, care L. Y. Yarbrough, Chmn., Bldg. Comm., contemplates building.

Fla., Tampa—First Baptist Church has drawings and specifications about ready for \$120,000 Sunday school addition, Lafayette St. and Plant Ave.; steel, frame, 3 stories and basement, about 58x135 ft., light concrete on steel joist fireproof floors, concrete sheet piling foundation, Pyrofil and 3-ply composition roof; James Knox Taylor, Archt., 100½ Lafayette St. See Machinery Wanted.\*

Ky., Fulton—First Methodist Church, Rev. J. V. Freeman, Pastor, having plans drawn by Spencer & Phillips, Goodwyn Inst. Bldg., Memphis, Tenn., for \$80,000 church and Sunday school; brick, stone trim, 3 stories, slate or tile roof, concrete floors, steam heat; main auditorium seat 750.\*

Ky., Newport—Bishop Francis W. Howard, 1140 Madison Ave., Cincinnati, Ohio, advises report of plans for Roman Catholic Church, Highland Ave. and Alexandria Pike, Southgate, near Newport, is not correct.

Ky., Princeton—First Baptist Church reported taking bids for brick building; 2 stories and basement, 108x79 ft., stone trim, wood trusses; R. H. Hunt Co., Archt., James Bldg., Chattanooga, Tenn.

La., Algiers, New Orleans—Alex W. Norman has drawn plans for chapel, Behrman Ave.; Rev. E. P. McGrath, S. M., Pastor, Church of the Holy Name of Mary, interested, advises nothing further to be done at present.\*

La., Baton Rouge—Keener Memorial Methodist Church, Rev. O. L. Tucker, Pastor, plans building, Government St. and Oak Drive.

Mo., St. Louis—First Presbyterian Church, Dr. C. E. Jenney, Pastor, will start work on first unit of \$450,000 building, Delmar Blvd. and Overhill Drive, 7200 West, University Hills division, about Jan. 1.

N. C., Greensboro—Westminster Presbyterian Church, Rev. C. E. Hodgkin, Pastor, plans erect \$15,000 Sunday School addition; 3 stories, 28.6x30 ft. with 20x22 ft., 1-story wing; Harry Barton, Archt., Jefferson Bldg. (Lately noted to erect \$100,000 addition).\*

N. C., Oxford—First Baptist Church, Main St., Rev. O. R. Mangum, Pastor, about decided on architect for \$100,000 building; 3 stories, 86x132 ft.\*

Okla., Ardmore—St. Phillip's P. E. Church has low bid at \$33,876 from Teel Snelson for building; J. R. White, Archt.\*

Okla., Hugo—First Christian Church start work in few days on frame auditorium; 40x90 ft., seat 750. Address The Pastor.

Okla., Oklahoma City—Trinity Baptist Church, care G. E. Taylor, erect \$30,000 building; brick and stone, 2 stories and basement; Hawk & Parr, Archts., Cotton Exchange Bldg.

Okla., Thomas—First Baptist Church contemplates addition. Address The Pastor.

Okla., Tonkawa—Methodist Church, Rev. W. E. Robinson, Pastor, plans \$75,000 building; architect not selected.

Okla., Tulsa—Eastern Orthodox of Holy Trinity Congregation, care Father Timothy, having plans drawn by Duggan & Blacker, 219 Castle Bldg., for \$40,000 brick and stone building, 11th and Guthrie Sts.\*

S. C., Greenville—Augusta Road Baptist Church, Rev. M. L. Banister, Pastor, plans to complete exterior brick work of church in Spring or Summer; now plastering section of interior.

S. C., Greenville—Welcome Baptist Church, care Rev. M. M. McCuen, Pelzer, plans brick building to replace structure destroyed by storm.

Tex., Dallas—Riggs Memorial Presbyterian Church, care F. N. Blackwell, 5355 Miller Ave., erect \$12,000 building, Greenville Ave. and McComas Drive; Mission type, frame and stucco, 1 story, 92x92 ft., concrete floors and foundation, Spanish metal tile roof; furnishings, equipment, etc., purchased; Fred F. and Chas. F. Peterman, Archts.-Engrs., 1223 Mercantile Bank Bldg.; bids Dec. 11.

Tex., Houston—Norhill Church of Christ, Rev. Oscar Smith, Pastor, plans brick veneer building, Cottage and Reagan Sts., East Norhill; 1 story.

Va., Galax—Baptist Church, Rev. J. R. Johnson, Pastor, plans \$50,000 building.

Va., Roanoke—Epworth Methodist Church, C. K. Lemon, Chmn., Bldg. Comm., 109 McComahan Place, South Roanoke, plans \$50,000 brick church and Sunday school building, Rosalind Ave. near Third St.; 2 stories and basement, 40x105 ft., auditorium seat 600.

## City and County

Ark., Bentonville—Benton County Quorum Court, W. R. Edwards, County Judge, will erect \$200,000 courthouse.\*

Ala., Bessemer—City Council, P. M. Matthews, Mayor, will consider ordinance to permit election on \$325,000 city hall bonds.

Ark., Blytheville—City, S. C. Craig, City Clk., erect \$60,000 brick city hall, Walnut and S. Second Sts.; 2 stories, 70x120 ft., Indiana limestone, rough face and common brick, built-up roof, yellow pine interior finish, oak floors, metal lath, struct. iron, metal sash, vault doors, ventilators, vacuum heating; Uzzell S. Branson, Archt., Farmers Bank Bldg.

D. C., Washington—District Commrs. receive bids December 22 at Room 509, District Bldg., for Police Station No. 14, containing 137,000 cu. ft.; proposal forms at Room 427.

Fla., Coral Gables, Miami—City of Coral Gables, Edw. E. Dymmers, Mayor, voted \$1,532,000 bonds, including \$300,000 to take over and complete coliseum for municipal auditorium, \$100,000 for additional fire stations, \$250,000 for city hall and \$50,000 for emergency hospital.\*

Fla., De Land—Volusia County Board of Commrs., W. P. Wilkinson, Chmn., receives bids Jan. 3 for courthouse; cost \$350,000, steel, reinforced concrete, brick, ornamental stone and terra cotta, 3 stories and basement, 132x169 ft., marble, tile, cement and composition floors, concrete foundation, built-up roof; plans and specifications from W. D. Harper & Co., Archts., Box 1216, Daytona Beach, and on file at offices S. D. Jordan; Clk. of Volusia County Court, De Land; Tampa Builders Exchange, Tampa, Fla.; MacDonough's Builders Exchange, Jacksonville, Fla.; Atlanta Builders Exchange, Atlanta, Ga., and Archts.\*

Fla., Fort Myers—City Commission erect \$60,000 auditorium on city pleasure pier under construction.

Fla., Tarpon Springs—Pinellas County Board of Commrs., E. H. Beckett, Chmn., will build and equip county poor farm; \$200,000 bonds sold.

La., Marksville—Following contractors estimating on \$210,000, reinforced concrete, brick and stone trim courthouse and jail: W. Horace Williams Co., Southern Bldg.; Caldwell Bros., 816 Howard Ave., both New Orleans; Knapp & East, Kaufman Bldg.; W. J. Quick, Swift Bldg.; P. Olivier & Son, 114 Bilbo St., all Lake Charles; S. W. Leard, North Blvd.; Burkes & Haley, 851 East Blvd., both Baton Rouge, all La.; Stewart & McGehee Construction Co., Kahn Bldg., Little Rock, Ark.; Kaucher-Hodges Co., Shrine Bldg.; D. D. Thomas & Son, L. & N. R. R. and Dunlap St., both Memphis, Tenn.; Ware Company, Constructors, 1614 Missouri St., El Paso, Tex.; L. H. Lacy, 2632 Swiss Ave., Dallas, Tex.; General Contracting Co., 607 Nogalitos St., San Antonio, Tex.; Jas. T. Taylor, First Natl. Bank Bldg., Fort Worth, Tex.; Yeager & Sons, Danville, Ill.; Herman J. Duncan, Archt., 120 Murray St., Alexandria, La.\*

La., Ponchatoula—Mayor and City Council rejected bids for reinforced concrete and pressed brick municipal building and receives new bids January 4; cost \$50,000; 2 stories, 45x92 ft.; city hall, jail and fire department on first floor, community hall seat 500 above; Wm. L. Barthel, Archt.\*

Md., Baltimore—E. J. Gallagher Realty Co., Munsey Bldg., erect 8 brick dwellings, 3600 block Ednor Rd.; 2 stories; total cost \$48,000.

N. C., Charlotte—Mecklenburg County Board of Commrs. opens bids Jan. 10 for steel jail equipment for top of new courthouse; cost \$60,000 to \$70,000; drawings and specifications on file at oce Louis H. Asbury, Archt., 1511 E. Fourth St.\*

Okla., Heavener—City receives bids Dec. 20 for brick building; cost \$30,000, 3 stories, 50x80 ft.; city offices and fire dept. on ground floor, community hall on second, Masonic Temple on third; Haralson & Nelson, Archts., Merchants Bank Bldg., Fort Smith.\*

S. C., Orangeburg—Orangeburg County Board of Commrs. possibly open bids about Feb. 1 for fireproof courthouse; cost \$150,000, 2 or 3 stories about 85x145 ft.; Jas. B. Urquhart, Archt., 607 Palmetto Bldg., Columbia.\*

Tex., Pittsburg—Camp County Commrs. Court, Joe R. Hooton, County Judge, receives bids January 18 for fire station and rest room building; 2 stories, brick; plans and specifications seen at office Chas. Chappell, County Engr.

Tex., San Antonio—Bexar County Board of Commrs. receive bids Jan. 10 for following equipment for \$1,000,000 courthouse addition under contraction by Walsh & Burney, 923 N. Flores St.: Steel and wood equipment, rugs,

Venetian blinds, electrical fixtures; Phelps & DeWees, Archts., Gunter Bldg.

Tex., San Antonio—City, John W. Tobin, Mayor, erect \$50,000 to \$60,000 building, Dwyer Ave. and Main Plaza, for city health dept. and clinic and detectives' offices; Leo M. J. Dielmann, Archt., 306 E. Commerce St.

## Dwellings

Ala., Birmingham—Jemison & Co., 221 N. 21st St., announce work to start on 2 dwellings, Redmont Park; one to cost about \$100,000.

Ala., Birmingham—Percy Brower, 3841 Glenwood Ave. erect brick veneer residence, Rockbridge Park; 2 stories, 30x90 ft., slate roof, tile baths, hardwood floors, steam heat; Warren, Knight & Davis, Archts., 1603 Empire Bldg.; ready for bids about Jan. 1.

Ala., Birmingham—Philip S. Mewhinney, Archt., 1014 Woodward Bldg., drew plans for brick veneer dwelling, Virginia Ave.; 1 story, tile roof, hardwood floors, tile bath, steam heat; bids in.

Ark., Forrest City—W. W. Campbell rebuild residence, Forrest and Garland Sts., lately noted burned at \$12,000 loss; brick veneer, 2 stories and basement, composition roof, oak floors, tile bath, garage; Estes W. Mann, Archt., Cotton Exchange Bldg., Memphis, Tenn.\*

Ark., Fort Smith—Cecil Warner, 2473 North B St., plans residence, Free Ferry Rd.

Fla., St. Petersburg—Taber-Ford Construction Co., 940 Bay St. North, plans model dwelling, Eagle Crest; Spanish type, hollow tile, concrete and stucco, 1½ and 2 stories, Spanish tile roof, oil burner, hot water heat.

Fla., Sebring—J. S. Paul, Winter Haven, erect 30 dwellings.

Ga., Atlanta—Paul A. Clement, 867 Rock Springs Rd., erect \$10,000 duplex, 860-71 Rock Springs Rd.; 1 story, frame.

Ga., Macon—Wm. H. Felton, Jr., 126 Georgia Ave., erect residence, Clayton St.

Ga., Savannah—F. J. Hiers erect 2 bungalows, 34th St.

La., New Orleans—A. H. Ehrensing, Archt., 3916 Coliseum St., ready about 3 weeks for bids on frame and stucco dwelling, Bruxelles St.

La., New Orleans—W. W. White, 3535 Louisiana Avenue Pkwy., has contracts for 10 duplexes.

La., New Orleans—J. H. Meyer, 3852 Napoleon Ave., wants sub-bids on plumbing, electric wiring and hardware for duplex Sprice St. near Fern St.

La., New Orleans—Mutual Building and Homestead Assn., Canal-Commercial Bldg., has \$15,000 permit to remodel building, 511-13 Carondelet St.

La., New Orleans—N. Ascani, 3709 Dumaine St., wants sub-bids on plastering, electrical work, painting, plumbing, tiling, brick work and tile roof, connection with single raised bungalow, Dumaine and Hennessy Sts.

La., New Orleans—B. Marphis, 1825 Gentilly Ave., contemplates residence, Crete and White Sts.

Md., Baltimore—Raymond A. Arnold, Bldr., 2929 Clifton Ave., erect 3 dwellings, Gittings Ave. and Blenheim Rd., Pinehurst; cost \$15,000 each.

Md., Baltimore—Lohmuller Building Co., 3001 Greenmount Ave., erect 12 brick dwellings, S. E. cor. Frisby and Montpelier Sts.; 2 stories; total cost \$36,000.

Md., Baltimore—Mount Vernon Land Co. erect 12 brick dwellings and garages, York Rd. and 39th St.; 2 stories; total cost \$58,000.

Mo., Kansas City—Dr. J. B. Cowherd, 63d and Brookside Sts., purchased site for English type residence.

N. C., Charlotte—H. C. Sherrill Co., 34 S. Tryon St., erect 7 dwellings, 1137 Greenwood Cliff, 1048-52 Kenilworth Ave., 1221-25-29-32 Harding Place; total cost \$49,000.

N. C., Mount Airy—E. G. Smith erect Colonial residence, on old road to White Sulphur Springs.

N. C., Mount Airy—C. M. Whitlock erect Colonial residence; drawing plans.

N. C., Raleigh—Manteo Development Co. probably erect number dwellings.

Tenn., Knoxville—B. L. Chambers erect \$15,000 brick veneer residence, Cherokee Blvd., Sequoyah Hills; 10 rooms, 2 stories.

Tenn., Knoxville—H. E. Rogers, 900 Jacksboro St., erect \$15,000 frame residence, 2070 E. Fifth Ave.; 2 stories, 12 rooms.

Tenn., Memphis—W. W. White, 1795 Nelson Ave., erect \$10,000 residence and double garage, 221-05 Hawthorne St.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tenn., Memphis—Frieda Mae Land erect residence, Edgewood Manor.

Tenn., Memphis—Dr. Frank Hall, Exchange Bldg., Cherry Rd. and Poplar Pike, erect \$18,000 brick residence, Cherry Rd. and Poplar Pike; 2 stories and basement, oak floors, tile baths, steam heat, garage and servants' quarters; Sieg & McDaniel, Archts., First Nat. Bank Bldg.; bids in.\*

Tex., Corpus Christi—Del Mar Corp., Tribune Bldg., erect 6 frame dwellings, Naples St.; cost \$5000 each; also 2 brick veneer dwellings, Cole St.; cost \$7000 each; 5 and 6 rooms.

Tex., Fort Worth—G. S. Anderson, Farmers and Mechanics Bldg., has \$18,000 permit for brick veneer residence, 2236 Medford Court.

Tex., Fort Worth—Dr. M. J. Briscoe has \$18,500 permit for brick veneer residence, 2412 Medford Court.

Tex., Houston—J. M. Heiser, 1908 Washington Ave., plans \$12,000 residence, 1724 Kipling St.; 2 stories, brick veneer.

Tex., Houston—Harry K. Johnson Trust, Stewart Bldg., erect about 40 small dwellings connection with farms development.

Tex., Houston—F. E. Jones, Gen. Mgr., T. A. Rogers Forwarding Co., Cotton Exchange Bldg., erect \$11,000 residence, Howard Drive near Neal Ave.

Tex., Houston—L. Richter, 1711 W. Main St., plans residence, Southampton Place.

Tex., Houston—Bonita Building and Lumber Co., 8401 Harrisburg Blvd., erect \$18,000 brick veneer dwelling, 2216 Calumet St.; 8 rooms.

Tex., Houston—E. H. Fleming, Humble Bldg., erect 2 dwellings, Southampton Addition; one 2 stories, brick, white stone trim, 7 rooms, Georgian type; H. A. Salisbury, Archt.; total cost \$50,000.

Tex., Houston—B. W. Holtz, 815 Sul Ross St., erect 2 brick veneer dwellings, 2509-13 Blodgett St.; 6 rooms; total cost \$19,000.

Tex., Houston—R. H. Pentz, 2009 Arbor St., erect \$25,000 Dutch Colonial residence, Albans Rd. near Wilton St.; brick, 2 stories, 7 rooms, 2 baths, garage and servants' quarters; Brickey, Wiggins & Brickey, Archts., State National Bank Bldg.

Tex., Houston—Jas. E. Smith, Republic Bldg., erect \$12,500 residence, 2425 Calumet St.; 10 rooms, 2 stories.

Tex., Houston—R. H. Smith erect \$27,000 residence, 1822 Sunset St.; Italian-Spanish type, 2 stories, 7 rooms, stucco on Celotex and metal lath, tile roof.

Tex., San Antonio—H. C. Thorman, 125 E. Travis St., erect \$50,000 residence, Park Hill Estates.

Va., Lynchburg—E. V. Perry, 208 Ninth St., erect 5 dwellings, 4111-17 Tremont St.; cost \$5000 each.

### Government and State

Tex., Amarillo—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., will remodel and erect addition to post office; cost \$50,000; brick, stone and reinforced concrete, 1 story, 40x63 ft.; bids in.\*

### Hospitals, Sanitariums, Etc.

Ark., Pine Bluff—Dr. F. P. Lytes, Masonic Temple Bldg., interested in \$100,000 campaign to erect hospital for negroes, probably on W. 13th Ave.

Ark., Rogers—Dr. H. S. Glascock interested in \$25,000 hospital; 30 beds; would be turned over to Hospital Board of M. E. Church South.

Fla., Coral Gables, Miami—City of Coral Gables, Edw. E. Dammers, Mayor, voted \$50,000 for emergency hospital.\*

Ga., Folkston—Charlton County Board of Commrs. plans \$30,000 hospital.

La., Shreveport—Charity Hospital, Dr. J. M. Moseley, Supt., erect \$65,000 service building; fireproof, reinforced concrete and brick, 2 stories, 33x102 ft., composition roof, plastered interior, wood and concrete floors, steel sash, steam heat; Seymour Van Os, Archt., City Bank Bldg.; ready for bids about 30 days.

Md., Frederick—Frederick City Hospital, Emory L. Coblenz, Chmn. of Hospital Comm., probably call for bids in few weeks for additions; cost \$150,000; Edw. Leber, Archt., Hay Bldg., York, Pa.; Jos. Evans Sperry, Consult. Archt., Calvert Bldg., Baltimore, Md.\*

Okla., Enid—North Independence Hospital Corp., 502 N. Independence St., erect \$25,000 to \$30,000 brick hospital; 34x74 ft., double oak finish floors, built-up asphalt roof, steam heat, 12 beds; furnishings, equipment, etc.,

about \$3000; equipment included 12 hospital beds, operating room and sterilizing outfit; R. W. Shaw, Archt.-Constr. Engr.; bids in. See Machinery Wanted. Address Dr. W. B. Newell, 212 American Nat. Bank Bldg.\*

Tex., San Antonio—Santa Rosa Infirmary, 745 W. Houston St., having plans drawn by Leo M. J. Dielmann, 306 E. Commerce St., for \$500,000 annex for medical and surgical cases and dietary dept.; probably cream colored brick, 5 stories, steam heat, 2 elevators.

Tex., San Antonio—A. C. Pancoast, Bexar County Engr., and I. Ewig, City Engr., are drawing plans for improvements to Robert B. Green Memorial Hospital; new \$10,000 foundation, remodel interior and exterior, etc.; cost \$100,000; bonds voted.\*

### Hotels and Apartments

Fla., South Jacksonville (Ind. Br. of Jacksonville)—George E. Joyce erect \$10,000, 2-story, 4-apartment house.

Ga., Decatur—Bids being received until December 21 for construction of \$230,000, 40-room community hotel building; information may be obtained from W. J. Sayward of Edwards & Sayward, Archts., 101 Marietta St., Atlanta.\*

Md., Baltimore—Whitepark Apartment Co. has permit for \$25,000, 2-story, 95x106-ft., brick, 12-suite apartment building, N. W. cor. Park Ave. and Whitelock St.; E. H. Browne, Archt., 402 St. Paul Place.\*

Mo., Kansas City—McCanles Building Co., care Guy H. McCanles, 400 Victor Bldg., will erect 75-suite apartment hotel, Harrison and 31st St.; 2 stories, non-fireproof, Spanish design, brick trimmed with ornamental tile.

N. C., Greensboro—F. B. Shuford purchased Hampton Avenue Methodist Church building; will remodel for apartments.

Tenn., Chattanooga—J. C. Setliffe erect \$10,000 2-story apartment house on Holtzclaw St.

Tenn., Dyersburg—C. F. Fumbanks, Archt., preparing plans for 2-story apartment house on Masonic St. for W. H. Fumbanks and Charles McLeod; 4 units of 5 rooms each, central heating plant.

Tenn., Memphis—B. E. Berry, 201 Fidelity Bank Bldg., has plans for erection of \$18,000, 2-story and basement, 50x30-ft. apartment building, Jackson Ave.; composition shingle roof, oak floors, tile baths; private plans.

Tenn., Memphis—S. Barchart, Turley Bldg., contemplates remodeling rooming house at 78 Adams Ave.; private plans.

Tex., Cotulla—Mr. and Mrs. W. J. Lacy call for bids after Dec. 20 for construction of \$65,000, 3-story, 40-room, reinforced concrete, brick and hollow tile La Salle Hotel building; Paul G. Suber & Co., Archts., Redell Bldg., San Antonio.

Tex., Dallas—H. Strickland, 2917 Thomas St., erect \$15,000, 32-room, brick veneer, 8-apartment building, 6006-8 Worth St.

Tex., San Benito—B. K. Goodman soon call for bids for construction of \$60,000, 3-story, 104x32 ft., brick and tile apartment building; face brick, stucco trim, metal lath, ornamental iron; Callaway & Nethercot, Archts., 622 Mesquite St., Corpus Christi.

### Miscellaneous

Ark., Fort Smith—Kiwanis Club, W. A. Tholen, Chmn. of Committee, planning construction of clubhouse for under-privileged children.

Mo., Hannibal—Woman's Club of Hannibal completed plans for construction of \$30,000, 42x122 ft., brick with terra cotta trim clubhouse, S. Fifth St.

Mo., St. Louis—Carmelite Order of St. Joseph purchased estate east of Price Road on south side of Clayton Road, St. Louis County, for convent purposes; will erect addition to present residence on property.

N. C., Hickory—Community Club, Mrs. E. L. Shuford, planning to erect clubhouse in Carolina Park.

Tenn., Knoxville—Cherokee Country Club, Forest Andrews, Empire Bldg., Chmn. Building Committee, will start work next spring on \$150,000, 2-story brick and stone clubhouse on site of present building Kingston Pike; Baumann & Baumann, Archts., 813½ Market St.

Tex., Brownsville—Rio Grande Valley Rod and Gun Club, Inc., A. Y. Baker, Pres., Edinburg, planning construction of \$70,000 clubhouse on Padre Island, near Point Isabel; Will N. Noonan Co., Archts., Builders Exchange Bldg., San Antonio.\*

Tex., Dallas—C. N. Hilton and associates plan construction of \$200,000, fireproof public market building at Ervay, Corsicana and

Browder Sts.; 110x300 ft., steel frame, stucco exterior finish; interior walls will be finished in white brick; Bryan & Sharpe, Archts., Athletic Club Bldg.

Tex., San Antonio—Etheridge Brothers Co., 230 Broadway, realtors, representing syndicate owning property at Martin and Jefferson Sts., announced plans for construction of building, character not announced.

### Railway Stations, Sheds, Etc.

La., Monroe—Missouri Pacific R. R., E. A. Hadley, Ch. Engr., St. Louis, Mo., plans immediate reconstruction of freight warehouse, at cost of \$20,000.

Md., Salisbury—Pennsylvania Railroad Co., A. C. Shand, Ch. Engr., Philadelphia, Pa., reported to expend \$150,000 for 30x150-ft. freight warehouse, with platform 500 ft. long, laying of tracks, etc.

Tex., San Juan—Gulf Coast Lines, care C. S. Kirkpatrick, Ch. Engr., 204 Union Station, Houston, will have completed plans about Jan. 15 by Kelwood Co., Travis Bldg., San Antonio, for 1-story, reinforced concrete, brick, hollow tile and cast stone passenger station.

Va., Bradshaw—Norfolk & Western Railway Co., J. E. Crawford, Ch. Engr., Norfolk, reported to erect new depot.

### Schools

Ala., Decatur—City Council considering erection of school building on Ninth Ave.

Ala., Huntsville—City of Huntsville, E. R. Matthews, Clerk-Treas., contemplates \$75,000 school bond election.

Ark., Fayetteville—Sigma Chi Fraternity of University of Arkansas, Kaye Lange, Pres., adopted plans for financing construction of \$40,000 chapter house; plans completed by Curtis Jones, Engr., Memphis, and K. E. N. Cole, Contr., 309 Ridgeway St., Little Rock.\*

Fla., Miami—Dade County Board of Public Instruction, Charles M. Fisher, Supt., receives bids until Jan. 10, at Board's office, Central School Building, 69 N. E. Third St., for construction of \$1,000,000 Miami Senior High School Building, S. W. 24th Ave. and First St.; plans and specifications may be obtained at office Kiehnel & Elliott, Archts., 930 Seybold Bldg.\*

Fla., Tarpon Springs—Pinellas County Board of Public Instruction, Clearwater, considering calling \$35,000 bond election in Special School District No. 1, to complete school auditorium.

Ky., Benham—Wisconsin Steel Co., 610 S. Michigan Ave., Chicago, Ill., received bids but contract not let for construction of 2-story, brick school building; cement, wood and terrazzo floors, concrete foundation, slate and composition roofing; Pond & Pond, Martin & Lloyd, Archts., 6 N. Michigan Ave., Chicago. [See Machinery Wanted—Hollow Tile; Steel Sash; Flooring; Roofing (Composition); Limestone].\*

Ky., Hazard—Perry County Board of Education reported to start work after Jan. 1 on \$100,000 school building in Lothair.

La., Pollock—Grant Parish Board of Education, Colfax, receives bids until Dec. 29 for construction of \$43,500, 2-story, brick veneer and hollow tile, 115x107-ft. High School building; pine floors, composition roof, reinforced concrete foundation, equipment and furnishings cost \$5000; C. Scott Yeager, Archt., Alexandria.\*

La., Gretna—Following contractors received plans and specifications and propose to bid on construction of \$150,000, 3-story, reinforced-concrete, brick and cement High School, bids to be opened January 7, by Jefferson Parish School Board; Caldwell Brothers, 816 Howard Ave.; H. W. Bond & Bro., 1019 Constantinople St.; Richard McCarthy, Canal-Commercial Bldg.; G. E. and E. E. Reimann, Canal-Commercial Bldg.; Gervais F. Favrot, Balter Bldg.; Thomas H. Brockman, Hibernia Bldg.; J. V. and R. T. Burkes, Carondelet Bldg.; J. A. Petty & Sons, Inc., Godchaux Bldg.; R. P. Farnsworth & Co., Canal-Commercial Bldg., and Charles Gilbert, Balter Bldg.; Wm. T. Nolan, Archt., Canal-Commercial Bldg.\*

Md., Baltimore—Miss Mary A. Alcock, principal of Greenwood School for Girls, W. North Ave., acquired property on north side Boyce Ave. between Charles St. Ave. and Ruxton Station; planning to erect school building.

Miss., Holly Springs—Trustees of Mississippi State College, care John E. Anderson, plan construction of dormitory within next year.

Miss., Natchez—City, Mayor L. A. Whittington, purchased property for new white

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high school building; soon select architect.

N. C., Beaufort—Robert L. Fritz, Supt. of Schools, receives bids Dec. 16 for construction of 2-story school building according to plans and specifications prepared by J. M. Kennedy, Archt., Merchants Bank Bldg., Raleigh, and also 1-story, 10-room school, designed by State Department, J. J. Blair, Director; plans and specifications for both projects at office Mr. Kennedy.

N. C., Durham—Durham County Board of Education rejected all bids for construction of \$23,000, 2-story, brick, 8-classroom school building, at Lowe's Grove; Rose & Rose, Archts., Trust Bldg.\*

N. C., Durham—City voted \$1,250,000 bonds for school improvements. Address M. B. Fowler, Sec. Board of Education.\*

S. C., Columbia—School Board, Dr. W. H. Hand, Supt., receives bids until Dec. 21 for construction of \$50,000 to \$60,000 annex to Shandon School; Lafaye & Lafaye, Archts., 1224 Sumter St.\*

S. C., Florence—School Board call election this week on \$275,000 school improvement bonds; include new grammar school, additions to high school, enlarge Central school for use as Junior High.

S. C., Kershaw—Board of Trustees School District No. 40, Lancaster County, J. M. Lowry, Secretary, has plans in progress by Lafaye & Lafaye, Archts., 1224 Sumter St., Columbia, for rebuilding recently burned school building; 2 stories, brick, tin roof; will use present foundation.

Tenn., Chattanooga—Hamilton County Board of Education approved Deere Park property as site for proposed North Chattanooga High School.

Tenn., Gainesboro—Jackson County Board of Education has postponed construction of brick and reinforced concrete school building until spring, 1927; Oemig & Nevins, Archts., 816 Independent Life Bldg., Nashville.\*

Tenn., Knoxville—Board of Education, L. H. Spilman, Pres., opened bids for erecting combination elementary and junior high school in West Lonsdale; V. L. Nicholson, 102 W. Clinch St., low bidder, at \$221,000.\*

Tex., Brownsville—University of Texas Extension Department, care Board of Regents, reported planning construction of \$300,000 Junior College and High School building.

Tex., Fort Worth—Fort Worth School District voted \$175,000 bonds and Forest Hill Independent School District voted \$20,000 bonds for school improvements; program includes school for Ninth Ward, North Side junior high, new building in Oakhurst, addition to South Fort Worth school, building for T. C. U. addition, gymnasium for junior high, etc.\*

Tex., Mission—School Board will call \$85,000 bond election for erection of junior high school building.

Tex., Petersburg—Board of Education, R. E. Jeffries, Pres., has final plans in progress by E. F. Rittenberger, 303 Blackburn Bldg., Amarillo, for \$50,000, 2-story, brick and steel, 12-room and auditorium school building.

Tex., Victoria—Board of Education, care W. H. Smith, Pres., receives bids until Dec. 30 for construction of \$70,000, 2-story, brick and reinforced concrete, stone trim, 127x58 ft. Junior College; classrooms, lecture room, offices, laboratory, study hall, etc.; separate bids on plumbing and heating at same time; William Ward Watkin, Archt., 212-3 Scanlan Bldg., Houston.\*

W. Va., Milton—Board of Education, Grant District, let contract to Blas Brothers at \$24,500 for construction of 2-story, 126x40-ft. school building; composition roof, wood and cement floors; William Francis Diehl, Archt., 626 Robson Prichard Bldg., Huntington, W. Va.\*

### Stores

Ala., Birmingham—George T. Penny, Bankers Bond Bldg., Pres. of American Land Co., purchased building on Fifth Ave.; will remodel at cost of \$25,000.

Ark., Fayetteville—M. I. Pearson & Son planning to erect store and filling station at N. College Ave. and Taylor St.

Ark., Prescott—E. L. Cox has plans by William Dill, 609 Boyle Bldg., Little Rock, for 2-story brick store and office building; plate glass fronts.

Fla., Leesburg—McCrorry Stores Corp., New York, reported planning construction of store and office building on Main St.

Fla., St. Petersburg—W. J. Warrington, 15 Second St. N., developer of City Gardens, announced work to start soon on \$10,000 business building, Gandy Blvd. and 44th Ave.

North; 45x70 ft.; provide space for 3 stores, office and extra room at rear.

Miss., Columbus—S. W. Jones and N. A. Padgett planning to erect business buildings on Main St.; J. W. Clower, owner of adjoining building, will erect brick structure.

Miss., Hattiesburg—Millhelm Co. and Wiesenbergs will rebuild structures on E. Front St. recently burned.

Mo., Webb City—Henry Kamisar, owner of Hub Department Store, S. E. cor. Main St. and Broadway, purchased property 25x100 ft. at rear of present store; plans to erect addition next spring.

N. C., Greensboro—C. C. Pierce and B. B. Tatum, 113 Depot St., erect \$12,000, 2-story, brick store building on Greene St.

Tenn., Chattanooga—James Kalanzis, 1709 Duncan Ave., erect 5 stores, Rossville Ave.; \$10,000.

Tenn., Memphis—Mrs. N. F. Sledge, 12 S. Auburndale St., purchased site, Sumner Ave. east of E. Parkway; contemplates erecting commercial building.

Tex., Amarillo—Dentex Realty Co., Barclay Ivins, Pres., 1021 Eakle Bldg., will erect 1-story, 140x45-ft. store building, W. Fifth and Alabama Sts. and filling station at W. Fifth and Virginia Sts.; Henry J. von Wyl, Archt., care Allied Architects, Denver, Col.

Tex., Brady—Brady Investment Co., S. McCollum, Pres., will expend \$120,000 improving recently purchased business building.

Tex., Corpus Christi—Dan Garza has preliminary plans in progress by Callaway & Nethercot, 622 Mesquite St., for \$10,000, 2-story, 30x50-ft. store and apartment building; concrete and wood floors, plate glass, metal lath.

Tex., Dallas—C. W. Snider, City National Bank Bldg., Wichita Falls, and J. Fred Smith, S. W. Life Bldg., Dallas, purchased 30-acre tract at N. W. cor. Hillcrest and Daniel Aves, University Park; reported to erect store buildings and theater to cost \$80,000.

Tex., Fort Worth—James T. Taylor, 2805 Farragut St., erect \$30,000, brick store building, W. Seventh and Lexington Sts.

Tex., Houston—Columbia Dry Goods Co., 501 Travis St., will remodel building; \$18,600.

Tex., Mercedes—G. K. Wattson will let contract first of Jan. for construction of \$40,000,

2-story, 75x100-ft., brick, concrete and stucco, 4-store and 8-apartment building; concrete foundation, concrete and wood floors, built-up roof; equipment cost \$6000 to \$8000; Ralph H. Cameron, City Natl. Bank Bldg., San Antonio, and Newell Waters, Velasco, Archts. (See Machinery Wanted—Incinerators; Electric Refrigerators.)\*

### Theaters

Mo., Kansas City—Dr. R. H. Simmons, 2608 Independence Ave., will rebuild Colonial Theater, 3838 Woodland Ave.; seat 1020 persons.

N. C., Greensboro—National Amusement Co., T. G. Leitch, Pres., S. Elm St., receives bids until December 20 for construction of \$300,000, 2-story, 110x225 ft., reinforced concrete and steel Carolina Theater, Greene and Washington Sts., except frame; tin pan concrete flooring, tile foundation already in place, pre-cast roof; Northeastern Construction Co., Commercial Bank Bldg., Charlotte, erecting structural frame work; James M. Workman and J. H. de Sibour, Archts., and Engrs., 111 N. Greene St. (See Machinery Wanted—Hollow Tile; Metal Doors; Sash and Trim; Wire Glass; Flooring; Roofing Tile; Ventilators; Sprinklers.)\*

Tenn., Memphis—Morris Kaplin and P. W. Lytle, Goodwin Institute Bldg., have final plans in progress by Joe T. Wallace, 1516 Bank of Commerce Bldg., for \$40,000, 1-story and balcony, 40x50-ft., brick, fireproof theater building, Poplar Ave. near Belvedere Blvd.; built-up roof, concrete floors, steel trusses; Ballas Amusement Co., 51 S. Cooper St., lessee.

W. Va., Grafton—McCasky Motion Picture Co., New York City, reported planning construction of \$100,000 theater building on property of Harvey U. Tobias on Main St.

### Warehouses

Ala., Mobile—Louisville & Nashville Railway Co., W. H. Courtney, Ch. Engr., 1110 Third St., Louisville, Ky., reported planning construction of \$170,000, fireproof, steel, brick and concrete warehouse, Water St. between Church and Theater Sts.

Fla., Miami—Miami Cash Feed Co. erect \$15,000, brick warehouse at 1044 N. W. 22d St.

## BUILDING CONTRACTS AWARDED

### Association and Fraternal

Ala., Montgomery—W. A. Price Heating Co. has heating contract for \$300,000 Scottish Rite Temple under construction; electrical work, Reeves Electric Co.; plumbing, Perry & McDonald; roofing and sheet metal, C. A. McDade & Son; limestone, Georgia Marble Works, all Montgomery; ventilating, G. F. Wheelock Co., Birmingham; structure 3 stories, 120x130 ft., composition floors, asphalt built-up roof; H. W. Witcover, Archt., 1723 Sixteenth St. N. W., Washington, D. C., and Savannah, Ga.; Hugger Brothers Construction Co., Contr., Shepherd Bldg., Montgomery; all material purchased.\*

### Bank and Office

Ala., Birmingham—Phoenix Realty Co., J. H. Loveman, 219 N. 19th St., let contract to Davis Co., 2033 Avenue C, Ensley, for \$300,000 office building, N. Second Ave. and 17th St.; work started; brick and terra cotta walls, reinforced concrete frame, 5 stories and basement, 100x140 ft., composition roof, concrete, tile and wood floors, steam heat, 1 passenger and freight elevator; Harry B. Wheelock, Archt., Steiner Bldg.; roofing and sheet metal work, Hinkle Bros., 2412 Avenue E., Birmingham; granite, Capitol Stone Co., 1 Terry St., Atlanta, Ga.\*

Fla., Jacksonville—Medical Arts Corp., care Austin Fullerton, 310 W. Church St., let contract for \$600,000 Medical Arts Bldg., W. Duval St., to James Stewart & Co., Inc., New Barnett Bank Bldg., Jacksonville; 17 E. 42d St., New York, etc.; fireproof, steel frame, brick, concrete, stone and stucco, 10 stories, 52.6x80 ft., tile and composition floors, 2 elevators, 4-story steel and brick garage, 426-28 Duval, to accommodate about 100 cars; furnishings, equipment, etc., \$125,000; Jefferson D. Powell and MacDonald Mayer, Asso. Archts., Professional Bldg.\*

Fla., Tampa—Standard Oil Co., Hillsborough and Lozano Sts., let contract at \$150,000 office building; hollow tile and terra cotta, Spanish tile roof, 84x105 ft., concrete foundation; furnishings, equipment, etc., \$75,000; plans by Engineering Dept., Standard Oil Co., Louisville, Ky., W. E. Glossop, Engr.\*

La., New Orleans—Crittall Casement Win-

dow Co., 10951 Hearn St., Detroit, Mich., J. T. Mann & Co., Agts., 319 Dryades St., New Orleans, has banking room sash contract for \$4,500,000 Canal-Commercial Bank & Trust Co., bank and office building; elevators, Otis Elevator Co., 852 Carondelet St., New Orleans; bronze work, Wm. H. Johnson Co., Brooklyn, N. Y.; limestone, Furst-Kerber Cut Stone Co., Bedford, Ind.; marble, Lantz-Missouri Marble Co., Carthage, Mo.; mail chutes, Cutler Mail Chute Co., Rochester, N. Y.; iron, Herzog Iron Works, St. Paul, Minn.; painting, Frank J. Matthews Co., Inc., 419 Carondelet St.; plastering, Moroney & Middleton, La. Bldg.; excavation, Thos. M. Johnston, 802 Perdido St.; flooring, Hartman-Salmen Co., Inc., La. Bldg.; millwork, National Sash & Door Co., Inc., 600 N. Dupre St., all New Orleans; Emile Well, Inc., Archt., 926 Whitney-Central Bldg.; O. M. Gwin Construction Co., Contr., Union Indemnity Bldg.\*

La., Rayville—Richland State Bank erect \$60,000 building, Louisa St.; contract let.

Miss., Gulfport—Following sub-contracts let for \$300,000 Bank of Gulfport: Stone, Delbold Stone Co., Louisville, Ky.; granite, Cold Spring Granite Corp., Cold Spring, Minn.; roofing and sheet metal, Hamilton Bros., Gulfport; millwork, Enoch Lumber & Manufacturing Co., S. State St., Jackson, Miss.; painting, Fowler Painting Co.; marble, tile and terrazzo, Dagostine & Angelina, 312 Dexter Ave., both Montgomery, Ala.; misc. and iron, Deacatur Steel & Iron Co., Albany, Ala.; plastering, Monahan Plastering Co., Audubon Bldg., New Orleans; N. W. Overstreet, Archt., Overstreet Bldg., Jackson, Miss.; E. V. Wolf, Engr.; A. C. Samford, Contr., Shepherd Bldg., Montgomery.\*

Tenn., Chattanooga—Otis Elevator Co., Volunteer Life Bldg., has contract to install 4 passenger elevators in \$1,000,000 Chattanooga Savings Bank & Trust Co. bank and office building; cost about \$75,000; elevator enclosures, Dolstrom Co., \$25,000; R. H. Hunt Co., Archt., James Bldg.; Foster & Creighton Co., Contr., Fourth and First Bldgs., Nashville.\*

Tex., Austin—Joe Macken, 306 W. Sixth St., has contract at about \$25,000 for wrecking present structure and excavating on site of \$600,000 Ernest Nalle store and office

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building, Eighth and Congress Sts.; Endress & Cato, Archts.; Robt. J. Cummins, Struct. Engr., both Bankers Mortgage Bldg., Houston; J. F. Johnson, Contr., 511 E. Third St.\*

Tex., San Antonio—Travis Investment Co., Travis Bldg., erect \$2,000,000 store and office building, Travis and Soledad Sts.; reinforced concrete, face brick, cast stone trim, 21 stories, 114x137 ft., flooring and roofing undetermined; Geo. W. Willis, Archt., Builders Exchange Bldg.; M. L. Diver, Engr., Calcasieu Bldg.; L. T. Wright & Co., Contrs., Builders Exchange Bldg.; excavating.\*

W. Va., Huntington—Huntington Sash, Door and Trim Co., 19th St. and Second Ave., has millwork contract for building for H. E. & E. C. Hines Bldg.; Meanor & Handloser, Archts., Robson-Prichard Bldg.; Jas. J. Weller & Sons, Contrs., 202 Elm St.\*

### Churches

Ala., Ensley—Christian Missionary Alliance, Birmingham, has \$11,000 permit for church, 2800 Avenue D; brick and hollow tile, 1 story and basement, tar and gravel roof, concrete foundation; owner builds.

Ark., Maxville—Missionary Baptist Church organized and started work on building. Address The Pastor.

Fla., Jacksonville—Riverside Presbyterian Church, Park and Post Sts., let contract for \$160,000 building to U. D. Gerbrich & Co., 325 W. Forsyth St.; main auditorium, including gallery, seat 1000; brick and stone, Gothic type; wiring, H. P. Foley Co.; plumbing and heating not let; Mark & Sheftall, Archts., Clark Bldg.\*

Ky., Ashland—First M. E. Church South let millwork contract for \$350,000 church to Huntington Sash, Door and Trim Co., 19th St. and Second Ave.; Meanor & Handloser, Archts., Robson-Prichard Bldg., both Huntington, W. Va.\*

N. C., Southern Pines—Emmanuel P. E. Church, Rev. Alaric James Drew, Rector, erecting \$25,000 parish house as first unit of group; \$18,000 rectory and \$85,000 main auditorium to follow.

Tenn., Knoxville—St. James' P. E. Church, Walter E. Mynderse, Chmn., Bldg. Comm., let contract to Weaver & McGill for \$19,000 auditorium unit of \$80,000 building, 1131 N. Broadway; 2 units to follow; English Gothic type, hollow brick and stucco, cast stone trim, ornamental bronze, slate roof; seat 500; Barber & McMurray, Archts., 425 W. Clinch Ave.\*

Tex., Coleman—First Baptist Church let contract at \$20,000 to Mote Construction Co., 1509 McCoy St., Dallas, for Sunday school; steel frame, brick, 3 stories, 42x84 ft.; C. C. Bulger, Archt., Praetorian Bldg., both Dallas. Address equipment proposals to C. E. Lancaster, Coleman.\*

Tex., Houston—C. E. Boyett, Stewart Bldg., has painting and decorating contract for \$200,000 First E. L. Church; Jos. W. Northrop, Jr., Archt.-Engr., West Bldg.; J. M. L. West, Contr., Avenue I.\*

Tex., San Antonio—First Congregational Church started work on 30x40-ft. building; kitchen, social room, gymnasium equipment. Address The Pastor.

W. Va., Welch—Methodist Church has broken ground for building. Address The Pastor.

### City and County

La., Bastrop—City, A. G. McBride, Mayor, let contract at \$57,000 to C. M. Corbin, Mansfield, for fireproof city hall; 2 stories, reinforced concrete, brick and cast stone trim; J. W. Smith, Archt., Ouachita Bank Bldg., Monroe.\*

Mo., Richmond Heights, St. Louis—Richmond Heights Board of Aldermen, Edw. J. Houlihan, Mayor of Richmond Heights, let contract to Joseph B. Loughman & Son, 306 N. Third St., St. Louis, for \$50,000 building to be known as City Hill Bldg., Dale Ave. and Big Bend Blvd.; red rough face brick, Carthage limestone trim, slate roof, 2 stories and basement, 45x66 ft.; E. Christopher, Archt., Room 1221-22 Louderman Bldg., St. Louis.\*

Okla., Blackwell—City let contract at \$24,897 to L. L. Viers, 524 W. Florence Ave., for fire station; brick and concrete, 2 stories, 48x80 ft., concrete and wood floors, concrete and brick foundation, Johns-Manville asbestos roof; H. H. Mahler Co., Archt., 204½ E. Third St., Tulsa; electric work and plumbing, Gearhard Bros., Blackwell; struct. steel, Western Iron and Foundry Co., E. Second St., Wichita, Kan.; misc. steel, Hutchinson Iron and Foundry Co., Hutchinson, Kan.\*

Va., Hillville—Carroll County Board of Commrs. let contract to Martins & Painter for altering and repairing courthouse.\*

### Dwellings

Ala., Birmingham—Mrs. S. C. Baldwin erect brick veneer residence, S. 34th St. and Altamont Rd.; brick veneer, 2 stories, 10 rooms, composition roof, hardwood floors, tile baths, cost about \$10,000; D. H. Galbraith, Contr., 1818 N. 26th St.

Ala., Birmingham—R. W. Lamar, 4017 S. Ninth Court., erect frame residence, S. Eighth Court near 35th St.; 1 story, 36x49 ft., composition roof, hot air heat, hardwood floors; Woolard & Lynch, Archts., 2115 N. First Ave.

Ala., Birmingham—John Porter, care Woolard & Lynch, Contrs., 2115 N. First Ave., erecting brick veneer residence, Redmont Park; 1 story, copper clad shingle roof, hardwood floors, tile bath, vapor heat; plumbing and heating, F. R. Heck, 2028 Humbolt Ave.; wiring, Whisler Electric Co., 419 N. 19th St.

Ala., Birmingham—Will F. Franke, care Jemison & Co., 221 N. 21st St., erect brick residence, Mountain Brooks Estate, Shades Valley; 2 stories and basement, slate roof, concrete foundation, hardwood floors, tile baths, steam heat; Denham, Van Keuren & Denham, Archts., 407 Age-Herald Bldg.; owner builds.

Ala., Birmingham—Lee McGriff, 2028½ N. First Ave., erect brick veneer residence, Overlook Rd., Forrest Park; 2 stories, 84x34 ft., slate roof, steam heat; Brooke B. Burnham, Archt., 1921 Age-Herald Bldg.; C. H. Hall, Contr., 5018 First Ave.; hardware, Butcher Tool and Hardware Co., 2018 N. Second Ave.

Ala., Dothan—P. I. Hopkins erect \$10,000 residence, W. Main and Moates Sts.; brick, 1 story, composition roof, oak floors, tile bath, frame garage; owner building.

Fla., Crystal River—Clifford Gaines erecting residence; J. N. Bailey, Contr.

Fla., Jacksonville—R. D. Knight, Atlantic Natl. Bank Bldg., erect \$18,000 brick building, Broad St. near Union St.; 2 stories; H. F. McAden, Contr., 3141 Riverside Ave.

Fla., Jacksonville—B. K. Hall, Montgomery Place, erect brick residence, 1½ stories, 73.9x66.10 ft., hardwood floors, reinforced concrete foundation, thatched slate roof; Marsh & Saceby Archts., Consolidated Bldg.; H. A. Matz, Engr., 1714 Walnut St.; Brown Realty Co., 105 Julia St., gen. contract at \$27,500; hot water heating and plumbing, T. A. Boyd, Walnut St.; electrical work, Frank Miller, 29th St., Brentwood; stone work, Arnold Stone, Brick and Tile Co., Lem Turner Road.; millwork, Duval Planing Mill, Eighth St. and R. R. Ave. Addressing Contr.

Fla., Miami—J. B. Rellly, Bank of Bay Biscayne Bldg., erecting \$48,000 residence, 14th Ave. and 11th St. S. W.; interlocking hollow tile and concrete, 3 stories, 32x85 ft., hardwood floors, wood and slate roof; furnishings, equipment, etc., \$20,000; Martin L. Hampton Associates, Archts.-Engrs., Royal Palm Hotel Casino; Dusenbery & Clifford, Contrs., Realty Board Bldg.\*

Ga., Atlanta—J. R. Jordan, 827 S. Pryor St., erecting \$12,000 brick veneer dwelling, 1745 S. Gordon St. S. W.; 2 stories, oak floors, composition shingle roof; W. E. Jordan, Archt., 857 Cherokee Ave. See Machinery Wanted.

Ga., Brunswick—White & Andrews erect number clapboard, stucco and brick veneer dwellings; 1½ and 2 stories, hardwood floors, brick foundations, tile roofs; cost \$3500 to \$5000 each; plans and construction by owners; work start about Jan. 1. Address Robt. L. White, Lebanon, Tenn. See Machinery Wanted.\*

Ga., Savannah—W. R. Moore erecting bungalow, 36th St. near Harmon St.

La., New Orleans—Oscar Lemoine erect frame residence, Monroe St. near Robert St.; 1 story, asbestos roof; V. D. Bellvue, Contr., 98 Robert St.

La., New Orleans—Mrs. Henry J. Manzella, 4827 Prytanla St., erect 4 double cottages, Gentilly Ave. near Grand Route St. John; total cost \$12,000; Geo. S. Cooper, Contr., 1706 Bodenger Blvd.

La., New Orleans—Rodger Simon erect \$10,000 single raised cottage, Dumaine St. near Hennessy St.; tile roof; N. Ascani, Contr., 3709 Dumaine St.

La., New Orleans—I. Singer, 3624 Napoleon Ave., let contract to Max Singer, 336 Baronne St., for brick residence, Peters Ave. and Magnolia St.; tile roof and baths, tile and hardwood floors, plastered interior, oil burner, hot water heaters, copper screens; Lockett & Chachere, Archts., Title-Guarantee Bldg.\*

La., New Orleans—Mr. Thauwald erect \$16,000 duplex, Peters Ave. and Story St.; E. A. Rosl, Contr.

Md., Baltimore—Bulletin Realty Corp. erect

\$10,000 stucco on cinder block dwelling, Lake and Roland Aves.; probably 2 stories, 30x60 ft., wood floors, stone foundation, slate roof; H. A. Stillwell, Archt.; Peyton B. Strobel Co., Contr., both 206 E. Lexington St.; electric work and plumbing, Francis Neihoff.\*

Md., Baltimore—Harry G. Carter, 1909 Frederick Ave., erect 7 brick dwellings, 1118-30 Homestead St.; 2 stories, 16x30 ft., Carey roofs; total cost \$21,000; Geo. Wessel, Archt., 3001 Lyttleton Rd.; owner builds.

Md., Baltimore—Thos. F. Connor, 211 N. Fremont Ave., erect frame dwelling and garage, 3609 Ellamont Rd.; 2½ stories, 28x30 ft., and 12x18 ft., slate roof, hot water heat; W. F. Elliott, Archt.; E. A. Elliott, Contr.

Md., Baltimore—North Ashburton Development Co., care Edgar A. Spies, 5118 Park Heights Ave., erect 41 brick dwellings, 3100 block Sequoia Ave.; 2 stories, 19x30 ft., slag roof; total cost \$100,000; Geo. Wessel, Archt., 3001 Lyttleton Rd.; owner builds.

Md., Baltimore—M. L. Saulsbury, 1825 Harford Ave., erect 11 brick dwellings, 100-20 Wheeler St.; 2 stories, 14x39 ft., slag roofs; total cost \$20,000; Geo. Wessel, Archt., 3001 Lyttleton Rd.; owner builds.

Md., Baltimore—Paul Eckert, 600 S. Streeter St., erect \$10,000 block dwelling and garage, 3315-17 Dorchester Rd.; 2 stories, 55x38 ft. and 21x21 ft., slate roof, vapor heat; total cost \$100,000; Ralph MacMurray, Archt.-Contr., 15 E. Fayette St.

Md., Baltimore—Frank S. Lynn, 41 W. Preston St., erect \$20,000 brick residence and garage, Rugby Rd. near Warrenton Ave.; 2½ stories, 40x30 ft. and 20x20 ft., slate roof, hot water heat; Mottu & White, Archts., 527 N. Charles St.; Sheppard Bros., Contrs.

Md., Baltimore—E. J. McGraw, 2304 Mt. Royal Terrace, erect \$10,000 brick residence, 207 St. Martins Rd.; 2 stories, 44x53 ft., slate roof, hot water heat; H. C. Aiken & Co., Archts.-Contrs., Blythwood Rd.

Md., Baltimore—Younger & Riddle, 4305 Ethland Ave., erect 3 frame dwellings, Miami Place; 2 stories, 25x32 ft., 26x34 ft. and 26x28 ft., slate roofs, steam heat; total cost \$15,000; plans and constr. by owner.

Md., Rockdale—James A. Marriott, Jr., Liberty and Rolling Rds., plans several cottages and bungalows.

Mo., St. Louis—Edwin Levis, Pres., Levis-Goodbar-Lloyd Millinery Co., erect Colonial residence, 6449 Wydown Blvd.; 2½ stories, 2 baths; Nolte & Naumann, Archts.; Geo. F. Bergfeld Investment & Construction Co., Contr., 610 Chestnut St.

N. C., Winston-Salem—Rufus Shore, Georgia Ave., erect \$22,000 to \$25,000 residence, Georgia Ave.; concrete, tile and stucco, 1 story, 40x88 ft., oak floors, concrete foundation, tile roof; T. J. Levesque, Archt., W. Fourth St.; Spencer Hanes, Engr., care West End Development Co.; Fogle Brothers Co., Contr., 202 Belwus Creek Rd.

Okla., Tulsa—J. H. McBirney, 515 S. Denver St., started work on \$150,000 residence, Childers Heights; brick and stone, 2 stories, basement and attic, concrete foundation, slate roof; Elmer Boillot, Archt., Kansas City, Mo.; E. W. Sipple, Asso. Archt., 10 E. Third St., Tulsa; Long Construction Co., Contr., Rialto Bldg., Kansas City.\*

Okla., Tulsa—Waite Phillips, Atlas Life Bldg., Tulsa, erect residence; Edw. Buehler Delk, Archt., Myer Blvd. and Ward Pkwy.; Cook & White, Mech. Engrs., Mutual Bldg.; Hans Von Unwerth, Struct. Engr., Finance Bldg.; Long Construction Co., Contr., Rialto Bldg., all Kansas City, Mo.\*

Okla., Tulsa—C. A. Mayo, 7413 S. Cheyenne St., let contract to T. E. Merrill for \$75,000 residence; brick veneer, 2 stories and basement, 68x62 ft.; L. E. Blue, Archt., 209 E. 18th St.\*

Tenn., Bemis—Bemis Cotton Mills erect 80 clapboard cottages; R. A. Heavner, Archt.; J. A. Stonfill, Contr., both Jackson. See Machinery Wanted.

Tex., Cisco—Jas. Tichenor erecting \$10,000 residence.

Tex., Harlingen—R. F. McCarty has plumbing and heating contract for 9-story store and office building for E. W. Baxter; electrical work, Weslaco Electric Co., Weslaco; Elwing & Muhlhausen, Archts.; M. L. Diver, Engr., Calcasieu Bldg., San Antonio; R. P. Blythe, Constr. Supervisor.\*

Tex., Lubbock—Dr. Sam H. Stewart, Temple Ellis Bldg., erect 2 duplexes; brick veneer, 1 story, 34x44 ft., reinforced concrete foundation; T. W. Jackson, gen. contract at \$6500 each; plumbing, L. B. McKinley; wiring, Hope Electric Co.; millwork, Plupps Planing Mill; roofing, Lydick Roofing Co.

Tex., San Antonio—L. E. Fite & Co., 317

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W. Travis St., erect 12 frame dwellings, 1500 block Lynwood Blvd.; 5 rooms; total cost \$21,600; owners build.

Va., Norfolk—W. E. Smith, 4312 Hampton Blvd., erect 15 dwellings, Colonial Place, Larchmont and Meadowbrook; cost \$13,500 to \$15,000 each, solid brick with face brick exterior, 2 stories, 32x40 ft., concrete foundations, oak floors, slate roofs, 2 tile baths, hot water heat, Yale hardware, Thomas Madocks vitreous china lavatories and toilet combinations, Kohler electric sink and dishwasher; total cost \$200,000; plans and construction by owner. (Cost lately incorrectly noted.)

### Government and State

Md., Annapolis—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., let contract at \$14,965 to Benj. H. B. Ennis, Jr., 1933 E. 31st St., Baltimore, for remodeling and enlarging postoffice; 1 story, brick.

Tex., Paris—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., let contract at \$72,000 to Chas. Weltz Sons, Des Moines, Iowa, for second-story brick and stone addition to postoffice and courthouse.

### Hospitals, Sanitariums, Etc.

Okla., Guthrie—Oklahoma Methodist Hospital and Nurses School let contract to Campbell & Price, 603 1/2 W. Main St., for \$250,000 hospital; fireproof, reinforced concrete, brick and stone, L shape, 4 stories and basement, 100 beds; Edw. Louis Gahl, Archt., S. W. Nat. Bank Bldg., both Oklahoma City.

Tex., Plano—Dr. S. B. Wyatt erect \$40,000 sanitarium; 2 stories, brick and concrete; E. E. Pittman, Contr.

### Hotels and Apartments

Fla., Jacksonville—E. J. Schwartz erect \$14,000, 2-story, frame, 4-flats building, Herschell St., for O. Von Beckenberg.

Fla., Ocala—George MacKay & Co. received contract for complete equipment of interior of 102-room Marion Hotel, now nearing completion; furniture to be product of White Furniture Co., Mebane, N. C.

Fla., St. Petersburg—Miss Billie Hanby, 6 Fourth St. S., has let contract to Mutual Construction Co. for erection of 3-apartment house, Bay St. and 11th Ave. North.

Fla., Trilby—Mrs. A. D. Touchton will manage 16-room hotel, contract for which has recently been let.

Ga., Atlanta—J. H. Whisenant, Briar Cliff Road, erecting \$100,000, 2-story, 60x185 ft. apartment building, 856 Briar Cliff Road; concrete tile walls, stucco with framing in partitions, hardwood floors, concrete tile foundation, tar and gravel roof; W. M. Buttrill, Archt.; work by day labor.

Mo., St. Louis—R. Darr, 2012 Virginia St., erect five 2-story, brick, 24x44 ft. tenements, 4915-27 Mardel St.; rubberoid shingle roofing, hot-air heat, \$35,000; owner builds.

Mo., St. Louis—W. P. Vols, 4800 Kansas St., erect three 2-story, brick, 32x52 ft. tenements, 3711-19 Winnebago St.; \$27,000, tar and gravel roofs, warm air heat; owner builds.

Mo., St. Louis—Northampton Realty Co., 5200 Nottingham St., erect four 2-story, 23x47-ft., brick tenements, 5065-7-9-71 Lindenwood St.; \$24,000, asbestos shingle roofs, warm air heat; Richardson Building Co., Archt.-Contr., 5200 Nottingham St.

Mo., St. Louis—Cyrus Crane Willmore Org. 737 Boatmen's Bank Bldg., let contract to M. E. Wakefield, 4933 Washington St., for \$8500, 36x53-ft. and \$5000, 25x48-ft. tenements at 4974-6 and 4978 Potomac St.; composition roofs, hot water heat; T. L. Wakefield, Archt., care Contr.

Mo., St. Louis—R. R. Rosemond Co., 6115 Gravois St., erect two 2-story, 35x46-ft. brick tenements, 5010-16 Mardell St.; \$18,000, tar and gravel roofs, hot air heat; owner is Archt.-Builder.

Mo., St. Louis—Charles S. Muerl, 3609 Hartford St., excavating for \$100,000, 3-story, brick and wood, 275x36-ft., 24-family apartment building, 5700 S. Broadway; hardwood floors, asphalt roof, concrete and rubble rock foundation; equipment and furnishings cost \$10,000; owner is Archt.-Builder. (See Machinery Wanted—Incinerators; Rolling Partitions; Vault Lights; Ventilators; Marble; Cast Stone.)

Mo., St. Louis—Frances-Rolf Realty Co., 110 N. Seventh St., ready to start work on \$800,00, 14-story reinforced concrete, brick and terra cotta, 100x120-ft. apartment building, 3733 Lindell Blvd.; concrete, tile and terrazzo flooring, concrete foundation, tile

and composition roofing, equipment and furnishings cost \$200,000; low-pressure steam heat, freight and passenger elevators; Plettsch & Price, Archts., Arcade Bldg.; William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St. See Machinery Wanted.

Mo., St. Louis—J. G. Urban, 2166 Tower Grove, erect two 2-story, 24x45-ft., brick tenements, 498-9 Tholoan St.; \$10,000, composition roofs; owner builds.

N. C., Charlotte—Addison Realty Co., Edwin L. Jones, Sec.-Treas., 1012 Dilworth Rd., will erect 64-room addition to recently completed Addison Apartments on E. Morehead St.; Willard G. Rogers, Archt.; J. A. Jones Construction Co., Contrs., Realty Bldg.

Tex., Amarillo—M. P. O'Brien will erect two \$15,000, 2-story, brick and reinforced concrete apartment buildings with day labor; composition roofs, gas heat; private plans.

Tex., Laredo—E. Garcia will have completed plans about Jan. 15 for \$45,000, 2-story, concrete, brick, stucco and cast stone, 8-apartment building; Kelwood Co., Archts. and Builders, Travis Bldg., San Antonio.

Va., Bristol—B. A. Meador, 141 Second Ave. North, Nashville, Tenn., representing John Van Range Co., Fifth St. and Broadway, Cincinnati, Ohio, received contract for complete equipment for kitchen and coffee shop of General Shelby Hotel, now nearing completion.

Va., Norfolk—Fairfax Hotel, J. Frank Bell, Pres., City Hall Ave., started improvements to cost \$100,000 and include complete renovation of the interior, addition of 60 shower baths, new elevators, etc.

### Railway Stations, Sheds, Etc.

Fla., Fort Lauderdale—Fred T. Ley & Co., Inc., Contrs., Vall Arcade, Miami, erecting foundations for passenger depot and freight warehouse, to cost \$40,000; depot contain 3 rooms, of concrete with interlocking tile and stone, steel roof with trusses, 32x122 ft.; freight shed of similar construction, 40x202 ft.; Seaboard-Air-Florida Railway, owners.

### Schools

Fla., Gainesville—State Board of Control, P. K. Yonge, Chmn., Aragon Hotel, Jacksonville, recently let contract to D. F. Douglas Co., New Smyrna, at \$118,200 for construction of 4-story Horticultural Building at University of Florida; slate and shingle roofing; R. M. Cunningham, heating and plumbing; Williams Electric Co., electrical work, both New Smyrna; Southern G-F Co., 263 Decatur St., Atlanta, Ga., reinforcing, etc.; Ingalls Iron Works Co., 720 Ave. D, Birmingham, Ala., structural steel; Arnold Stone, Brick and Tile Co., Lem Turner Rd., Jacksonville, east stone; Rudolph Weaver, Archt.

Fla., Frostproof—Frostproof Special Tax School District No. 22 has voted \$45,000 bonds to complete \$100,000 high school building now under construction; Marshall-Jackson Co., Inc., Lakeland, Contrs.; M. Leo Elliott, Archt., Tampa. (See Machinery Wanted—Flooring (Hardwood).)

Fla., New Port Richey—Pasco County Board of Public Instruction, Dade City, let contract to L. M. Miller at \$16,880 for construction of 4-room and hall addition to Gulf High School.

Fla., St. Cloud—Electrical Engineering Co., Dade City, Fla., and St. Louis, Mo., received contract for electrical work, amounting to \$6700 on new school building.

La., Doyline—Webster Parish School Board, Minden, let contract to A. E. Cupps, Texarkana, Ark.-Tex., at \$67,500 for construction of 2-story brick and reinforced concrete school building; fireproof, Barrett roof, plastered interior; Edward F. Neild, Archt., Merchants Bldg., Shreveport.

La., Blacksburg—C. Grady Cates, Consult. and Sales Engr., 207-8 Boxley Bldg., Roanoke, has been awarded contract to furnish corrugated reinforcing steel, Fenestra steel sash, International steel casements, rolled steel door frames and lead glass for casements, total about \$10,000, for Chemical Laboratory at Virginia Polytechnic Institute; Carneal & Johnston, Archts., La. Rwy. & Power Bldg., Richmond; D. J. Phipps, Contr., Boxley Bldg., Roanoke.

La., Maurice—Vermillion Parish Board of Education, J. H. Williams, Sec., Abbeville, let contract to G. A. Trahan, Lafayette at \$11,231, for construction of 1-story frame school building; Ye Planry Corp., Archts., 1713 1/2 Live Oak St., Dallas, Tex.

La., Provencal—Natchitoches Parish School Board, E. A. Lee, Supt., Natchitoches, let contract to E. E. Rabalais, Bunkie, at \$63,671 for construction of 2-story, brick and reinforced concrete school building; J. W. Smith, Archt., Ouachita Bank Bldg., Monroe.

Tenn., Nashville—Fisk University remodeling chapel at cost of \$10,500, work by day labor and sub-contracts; plans by and work under McKissick & McKissick, Morris Memorial Bldg.; electrical work by Jamison Electric Co., 429 Fourth Ave. North; roofing, T. L. Herbert & Son, 174 Third Ave. North; shop work, J. O. Kirkpatrick, 140 N. First St.; painting, Sherwin-Williams Co., 500 Union St.

Tex., Borger—School Board let contract to H. H. Shell & Son, Lubbock, for construction of \$100,000, 2-story, brick, reinforced concrete frame and hollow tile school building; Reliance Brick Co., Lubbock, received brick and tile contracts.

Tex., Nacogdoches—Board of Education let contract to F. A. Mote, 1509 McCoy St., Dallas, for construction of \$40,000 auditorium at High School.

Va., Eastville—Board of Education, D. W. Peters, Supt., let contract to Henry Roberts, Eastville, for construction of \$16,000 addition to High School building; brick, 3 classrooms, auditorium and office.

### Stores

Ala., Albany—B. L. Malone, 411 Second Ave., erect \$35,000 to \$40,000, 1 story, brick, 22 1/2 x 50-ft. store buildings, Lee St.; cement foundation, concrete floors, tin roof; owner builds. (See Machinery Wanted—Steel Sash and Trim; Cast Stone.)

Ala., Birmingham—Mrs. Minnie Breyman let contract to The Davis Co., 2023 Avenue C, Ensley, for 1-story, brick, 50x150-ft. store building S. 20th St. and Avenue H; Wm. Leslie Welton, Archt., 1905 American Trust Bldg.

Ala., Birmingham—F. R. Daly let contract to White & Coleman, 601 Martin Bldg., for remodeling store building at S. 12th Ave. and St. Charles St.; Turner & McPherson, Archts., 1203 American Trust Bldg.

Ala., Birmingham—Twentieth Street Realty Co., care George Gordon Crawford, Brown-Marx Bldg., let contract to A. C. Samford, Shepherd Bldg., Montgomery, for 3-story, 140x75-ft. store building, 20th St. and Second Alley; brick exterior on steel frame; masonry awarded Griffith & Turner, 416 N. 21st St.; Miller & Martin, Archts., 911 Title Guarantee Bldg.

Ark., Siloam Springs—F. W. Demmelmire erect 1-story frame and stucco store building, with day labor; private plans.

Fla., Jacksonville—A. L. Clayton, Contr., Blum Bldg., erect \$10,500, 1-story, brick and tile store building, Cedar, between Orange and State Sts., for Guy Marvin.

Fla., Tampa—Franklin & Lafayette Holding Co. expend \$15,000 remodeling building at corner Lafayette and Franklin Sts.; G. Herbert French, Archt., Riverside Drive; Flagler & Watson Construction Co., Contrs., 1110 Grand Central Ave.

Fla., Winter Haven—Drumheller Construction Co. Inc., received contract for erection of 2-story, steel and hollow tile, finished in stone and stucco, building on N. Third St.; 2 storerooms on first floor offices and apartments above.

La., Bastrop—F. L. Roe, Jr., Box 548, has let contract to W. H. Blane at \$11,600 for construction of 2-story, brick and tile, 23 1/2 x 80 ft. store and office building, N. Washington St.; concrete and wood floors, metal lath and plaster partition walls, Johns-Manville roof, equipment and furnishings cost \$2000.

Md., Baltimore—Gus Cavacos, 1001 W. 36th St., let contract to Fred Kelley & Son for construction of three 1-story, 44x60 ft. buildings, 5428-32 Harford Road; \$10,000, stove heat; Alex. C. Milkton, Archt., 5103 Liberty Heights Ave.

Mo., St. Louis—J. G. Goehring, 3134 Winnebago St., let contract to H. H. W. Cunningham, 1417 Destrehan St., for \$10,000, 2-story, brick, 35x50 ft. store and tenement, 4370 Manchester St.; tar and gravel roof; A. Meyer, Archt., Central Natl. Bank Bldg.

N. C., Asheville—J. E. Moss Iron Works, 4 28th St., Wheeling, W. Va., has contract to fabricate and erect approx. 800 tons of steel for \$1,000,000 Grove Arcade Building, for which John M. Geary Co., Contrs., Jackson Bldg., has general contract.

N. C., Greensboro—King Cotton Hotel Co. erecting 2-story brick building to abut 13-story hotel now nearing completion; contain 4 storerooms on first floor, loft above; Foundation Co., Contrs., Boardwalk and W. 29th St., New York and Atlanta, Ga.

N. C., Hendersonville—R. Skalowski, 157 E. Main St., Spartanburg, S. C., will erect 3-story, 43x105 ft. brick store buildings, Main St.; concrete foundation, built-up roof; Star

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Dray Co., excavating; Pace & Ward, Fourth Ave., hot water heating; Beck Plumbing Co., Main St., plumbing; Hendersonville Electric Co., Fifth Ave., electric work; plans and construction by K. G. Justus & Son.\*

Tenn., Knoxville—Herbert Aston, Empire Bldg., will erect 2-story, 38.6x82 ft., brick and wood store building, Western Ave. near Locust St.; maple floors, concrete foundation, built-up roof; Albert E. Gredig, Archt., Gay and Church Sts.; owner builds by day labor. [See Machinery Wanted—Wire Glass; Flooring; Roofing (Composition); Ventilators; Terra Cotta Trim.]\*

Tenn., Memphis—S. R. Lee let contract to F. J. Ozanne & Co., both Empire Bldg., for \$18,000 concrete additional story at 195 Madison Ave.

Tex., Amarillo—Ware, Ware & Garner let contract to Ledford & Tucker, Panhandle Bldg., for \$14,000, 2-story, brick and concrete business building; composition roof, gas heat.

Tex., Houston—James M. L. West, Avenue I, received contract at \$37,546 for remodeling of B. A. Reisman building at 412 Washington Ave.; Joseph Finger, Archt., Keystone Bldg.

Tex., Plainview—J. C. Anderson, Jr., let

contract to Harrison & Smyth for construction of 50x150 ft. brick and concrete building on Austin St.

Va., Danville—Jefferson Ave. Improvement Co. let contract to Plumer Wiseman & Co., Masonic Temple, for remodeling old General Hospital at Jefferson and Loyal Sts. for 8 stores and 3 apartments.\*

### Theaters

Ala., Carbon Hill—W. S. Thornton erecting 1-story, hollow tile and stucco, 35x115-ft. theater building, Maple St.; galvanized metal roof, concrete floors and foundation, cost \$8000; equipment and furnishings, \$4000. [See Machinery Wanted—Metal Ceilings; Flooring (Rubber Tile); Roofing (Tile and Metal).]\*

Fla., Lakeland—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, has let following sub-contracts on \$350,000, 120x140-ft. theater and office building for Lakeland Amusement Co.: Gas-steam heat, Carrier Engineering Corp., Newark, N. J.; structural steel, Ingalls Iron Works, 720 Ave. D, Birmingham, Ala.; roofing and sheet metal, South Florida Roofing and Art Metal Works, 302 N. Willow St.; cast stone, Burton Cast Stone Co., N. Rome and Arch St., both Tampa; plumbing, E. M. Watts, Lakeland; steel, hollow tile and brick construction, Johns-Manville roofing; James E. Casale, Inc., Archt., Tampa Theater Office Bldg., Tampa; W. C. Spiker & Co., Engrs., Forsyth Bldg., Atlanta, Ga. (See Machinery Wanted—Tile; Metal Doors, Sash

and Trim; Wire Glass; Flooring; Marble; Cast Stone.)\*

La., Shreveport—Shreveport Little Theater, C. R. Minor, Pres., 2720 Fairfield Ave., let contract to Werner Co., Inc., for construction of \$30,000 Little Theater building on Margaret Place; auditorium 40x48 ft., seating capacity 300, stage 26x55 ft.; Clarence W. King, Archt., Giddens Lane Bldg.

Tex., Beaumont—Otis Elevator Co., 11th Ave. and 26th St., New York, local office at McKinney and Jackson Sts., Houston, received contract for automatic elevators in \$540,000 theater building for Jefferson Amusement Co., 14 Perlestein Annex.\*

### Warehouses

Ala., Birmingham—Birmingham Realty Co. let contract to Foster & Creighton Co., Seventh Ave. N., Birmingham, and Fourth and First Bldg., Nashville, Tenn., for \$100,000, 2-story, 100x182.5-ft. warehouse, First Ave. and 16th St.; cement floors, concrete foundation, tar and gravel roof. Address equipment proposals to Graybar Electric Co., Inc., 101 S. 21st St.; Charles H. McCauley, Archt., 708 Jackson Bldg. [See Machinery Wanted—Tile; Metal Doors, Sash and Trim; Plaster Board; Roofing (Composition); Limestone; Elevators.]\*

Ala., Dothan—Dothan Warehouse Co., care K. P. Hollans, erecting \$20,000, brick, fireproof warehouse, rear of Martin Hotel, between Martin and Crawford Sts.; concrete floors, built-up roof; private plans; work by owner.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

**Air Compressor.**—Contractor, Room 302-A, 1947 Broadway, New York City.—Wants 9x8 up to 12x12 belted air compressor.

**Ambulance.**—Frank H. Owen, Chmn. City Comsn., Jacksonville, Fla.—Receives bids December 29 for one sedan type ambulance, fully equipped, balloon tires, electric lights, etc.; also for one automobile sedan for use of Police Dept.; M. W. Bishop, Sec., Room 13, City Hall.

**Asthma Tube Cigarette Machine.**—J. R. Lamothe, 1820 E. Beaver St., Jacksonville, Fla.—Wants machine to make asthma tube cigarette inhalers.

**Baling Machines.**—Hackley Morrison Co., Inc. (Mcby. Denler), 1708 Lewis St., Richmond, Va.—Wants machine for baling excelsior, preferably steam driven; correspond with manufacturers.

**Bathroom Fixtures.**—John K. Jameson, Bald Knob, Ark.—Wants prices on bathroom fixtures for \$4500 residence.

**Bicycles.**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids Dec. 30 to furnish 140 bicycles, delivery Philadelphia, Pa.; Sch. No. 331.

**Boilers.**—Machinery Record, Box 733, Richmond, Va.—Wants three B & W boilers, vertical inclined headers, 250 to 300 h.p. capacity each, 9 or 12 sections high, 100-lb. pressure, 36 or 42 in. long drums or could use cross drums.

**Bottles.**—See Containers.

**Bottling and Filling Machines.**—R. J. Garrett, Jr., Manufacturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants prices on machinery for bottling and filling cold cream jars.

**Brick.**—James Knox Taylor, 100½ Lafayette St., Tampa, Fla.—Wants prices on brick for \$120,000 Sunday school.

**Bridge.**—State of Oklahoma will build 10 bridges. See Construction News—Roads, Streets, Paving.

**Bridge.**—State of Virginia will build 7 bridges. See Construction News—Roads, Streets, Paving.

**Bridge.**—Punta, Gorda, Fla. See Construction News—Bridges, Culverts, Viaducts.

**Bridge Building Materials.**—Duval County Comms., Frank Brown, Clk., Jacksonville, Fla.—Receives bids Dec. 23 for 800 lbs. test-cement, 378 cu. yds. No. 34 crushed slag or granite; 174 cu. yds. concrete sand; delivered at site of Little Pottsburgh Creek Bridge on Atlantic Blvd.

**Brooders, etc.**—East Texas Hatcheries, W. D. Ambrose, Pres., Nacogdoches, Tex.—Wants prices on brooders and small equipment.

**Bucket.**—Machinery Record, Box 733, Richmond, Va.—Wants one ½ or ¾ yd. dipper bucket.

**Cast Stone.**—James Knox Taylor, 100½ Lafayette St., Tampa, Fla.—Wants prices on cast stone for \$120,000 Sunday school.

**Cast Stone.**—Walter Sibert, 31-32 Nusbaum

Bldg., Norfolk, Va.—Wants prices on cast stone for \$25,000 orphans' home, New Market, Va.

**Cast Stone.**—B. L. Malone, 411 Second Ave., Albany, Ala.—Wants prices on cast stone for \$35,000 store building.

**Cast Stone.**—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, Fla.—Wants prices on cast stone for \$350,000 theater building at Lakeland.

**Cast Stone.**—Charles S. Mueri, 3609 Hartford St., St. Louis, Mo.—Wants prices on cast stone for \$100,000 24-family apartment building.

**Chassis.**—Board of Awards, F. A. Dolfeld, City Register, Baltimore, Md.—Receives bids December 22 for 1½-ton chassis for Bureau of Transportation; O. F. Lackey, Head of Bureau.

**Chicken Feed.**—East Texas Hatcheries, W. D. Ambrose, Pres., Nacogdoches, Tex.—Wants prices on chicken feed, etc.

**Containers.**—R. J. Garrett, Jr., Manufacturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants prices on glass jars, opal jars, bottles, etc., for cosmetics.

**Covering Machine.**—See Paper Box Machinery.

**Crane.**—See Shovel and Crane.

**Cranes.**—Louis A. Tarr, Inc., Sharp and Conway Sts., Baltimore, Md.—Wants one 5-ton, one 10-ton, and one 15-ton second-hand overhead cranes; can possibly arrange span to suit.

**Drugs.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 17 for drugs.

**Drugs.**—R. J. Garrett, Jr., Manufacturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants prices on crude drugs, raw materials for perfume, alcohol, etc.

**Drugs.**—U. S. Veterans' Bureau, Supply Division, Washington, D. C.—Receives bids Dec. 20 for 150 bottles menthol, 200 bottles sodium phosphate, 150 bottles powdered or granular dextrose, 50 bottles liquid glucose, etc.; also on Dec. 21 for 800 bottles chloroform, U. S. P.

**Electric Fixtures.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids Dec. 16 for electric fixtures.

**Electric Floor Sander.**—Contracting & Engineering Co., Box 38, Atlanta, Ga.—Wants data and prices on electric floor sander.

**Electric Hydraulic Dredge and Equipment.**—Panama Canal A. L. Flint, General Purchasing Officer, Washington, D. C.—Receives bids January 12 to furnish Diesel electric hydraulic dredge and equipment. Blank forms and information (Circular 1773) on application to offices of Panama Canal Asst. Purchasing Agents at 24 State St., New York; 611 Gravier St., New Orleans, La.; Fort Mason, San Francisco, Calif.; also from U. S. Engr. offices throughout country.

**Electric Refrigerators.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace

Apts., Louisville, Ky.—Wants prices on electric refrigerators for 11-story apartment building.

**Electric Refrigerators.**—Robt. L. White, Lebanon, Tenn.—Wants prices on electric refrigerators for dwellings.

**Electric Refrigerators.**—G. K. Wattson, Mercedes, Texas.—Wants prices on electric refrigerators for \$40,000 store and apartment building.

**Electric Refrigerators.**—Chas. Bauer, 2705 Travis St., Houston, Tex.—Wants prices on electric refrigerators for \$10,000 duplex.

**Electric Refrigerators.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on electric refrigerators for \$1,000,000 apartment building.

**Electric Refrigerators.**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on electric refrigerators for \$25,000 orphans' home, New Market, Va.

**Electric Signs.**—Pallanza Park Development Co., 535 Central Ave., St. Petersburg, Fla.—Wants data on commercial electric signs; correspond with manufacturers.

**Elevators.**—Foster & Creighton Co., Contractors, Seventh Ave. North, Birmingham, Ala.—Wants prices on 2 elevators for \$100,000 2-story warehouse.

**Engines.**—Office of Dist. Engineer, Mississippi River Comm. Dredging Dist., Box 1017, Memphis, Tenn.—Receives bids Dec. 30 to furnish and deliver two 500 h.p. uniflow engines.

**Filter.**—See Water Works.

**Floor Finishing Machines.**—Contracting & Engineering Co., Box 38, Atlanta, Ga.—Wants data and prices on electric floor finishing machines.

**Flooring.**—Herbert Aston, Church and Market Sts., Knoxville, Tenn.—Wants prices on tile and hardwood flooring for stores building.

**Flooring.**—Robert L. White, Lebanon, Tenn.—Wants prices on tile, hardwood and linoleum flooring for \$3500 to \$5000 dwellings.

**Flooring.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on tile, terrazzo, hardwood, linoleum, wood block, rubber tile and composition flooring for 11-story apartment building.

**Flooring.**—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, Fla.—Wants prices on tile and concrete flooring for \$350,000 theater building at Lakeland.

**Flooring.**—Pond & Pond, Martin & Lloyd, Archts., 6 N. Michigan Ave., Chicago, Ill.—Wants prices on terrazzo and hardwood flooring for school building, Benham, Ky.

**Flooring.**—J. R. Jordan, 827 S. Pryor St., Atlanta, Ga.—Wants prices on tile and hardwood flooring for \$12,000 dwelling.

**Flooring (Hardwood).**—C. A. Berg, Supt.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



of Construction, Frostproof, Fla.—Wants prices on hardwood flooring for school building.

**Flooring.**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on hardwood and composition flooring for \$25,000 orphans' home, New Market, Va.

**Flooring.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on tile, terrazzo, concrete, linoleum and rubber tile flooring for \$1,000,000 apartment building.

**Flooring.**—Chas. Bauer, 2705 Travis St., Houston, Tex.—Wants prices on tile and hardwood flooring for \$10,000 duplex.

**Flooring (Rubber Tile).**—W. S. Thornton, Carbon Hill, Ala.—Wants prices on rubber tile flooring for theater building.

**Flooring.**—Chas. H. Baxter, 230 Peck Ave., San Antonio, Tex.—Wants prices on tile, hardwood, linoleum, wood block and rubber tile flooring for 20 frame bungalows.

**Flooring.**—B. L. Burford, Gen. Sec., Y. M. C. A., Greenville, Miss.—Wants prices on hardwood and wood block flooring for \$21,000 building.

**Flooring (Composition).**—James Knox Taylor, 100½ Lafayette St., Tampa, Fla.—Wants prices on composition flooring for \$120,000 Sunday school.

**Flooring.**—James M. Workman and J. H. de Sibour, Archts., and Engrs., 111 N. Greene St., Greensboro, N. C.—Wants prices on tile, linoleum and rubber tile flooring for \$300,000 theater building.

**Flooring (Tile).**—Bank of Carson, Inc., Carson, Va.—Wants prices on tile flooring for bank building.

**Floor Tile.**—U. S. Veterans Bureau, Room 791, Arlington Bldg., Washington, D. C.—Receives bids January 4 for tile floors in mess and kitchen, building No. 4 at U. S. V. Hospital No. 57, Knoxville, Iowa.

**Floor Tile.**—Herbert Aston, Empire Bldg., Knoxville, Tenn.—Wants prices on floor tile for store building.

**Frog (Standard Gauge).**—Hackley Morrison Co., Inc. (Mchy. Dealer), 1708 Lewis St., Richmond, Va.—Wants one No. 7 8½-lb. standard gauge frog.

**Generator Set.**—Machinery Record, Box 733, Richmond, Va.—Wants one motor generator set, 100 kw., 125/250 volt, 3 wire D. C. generator direct connected to 3 phase, 60 cycle, 440 volt motor; will consider belted unit.

**Glass and Opal Jars.**—See Containers.

**Gloves (Canton Flannel).**—Priest & Co., Winter Haven, Fla.—Wants data on canton flannel gloves; correspond with Southern manufacturers.

**Hardware.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 17 for hardware, including files, putty knives and scraper, nail sets, nippers, screws, drills, etc.

**Holst.**—Standard Machinery and Equipment Co., Spartanburg, S. C.—Wants double drum belt holst capacity for 30-ton derrick; state price, condition, etc.

**Holsts.**—See Wheels (Fordson Tractor) and Equipment.

**Hollow Tile.**—James M. Workman and J. H. de Sibour, Archts., and Engrs., 111 N. Greene St., Greensboro, N. C.—Wants prices on hollow tile for \$300,000 theater building.

**Hollow Tile.**—G. Herbert French, Archt., 21 Southern Bldg., Tampa, Fla.—Wants prices on hollow tile for garage.

**Hollow Tile.**—Pond & Pond, Martin & Lloyd, Archts., 6 N. Michigan Ave., Chicago, Ill.—Want prices on hollow tile for school building, Benham, Ky.

**Hospital Equipment.**—Dr. W. B. Newell, 212 American Natl. Bank Bldg., Enid, Okla.—Wants prices on general hospital equipment for 12-bed hospital.

**Incinerator, etc.**—Office of Adjutant General, Room 1040, 100 State St., Albany, N. Y.—Receives bids Dec. 21 for construction of incinerator and can-washing equipment at State Camp, Peekskill, N. Y.

**Incinerators.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on incinerators for 11-story apartment building.

**Incinerators.**—Charles S. Mueri, 3609 Hartford St., St. Louis, Mo.—Wants prices on incinerators for \$100,000 24-family apartment building.

**Incinerators.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on incinerators for \$1,000,000 apartment building.

**Incinerators.**—G. K. Wattson, Mercedes,

Texas.—Wants prices on incinerators for \$40,000 store and apartment building.

**Interior Tile.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on interior tile for 11-story apartment building.

**Jute Scrim.**—Troy W. Lewis, Box 551, Little Rock, Ark.—Wants samples and prices on jute scrim material in rolls and can use 500 yds. at a time; f. o. b. Little Rock, sight draft attached; desires to communicate with wholesale concerns in Baltimore, Md., and New York City.

**Labels.**—R. J. Garrett, Jr., Manufacturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants prices on labels.

**Lamps (Bedside).**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 27 for 150 hospital bedside lamps, Miller No. 2232 or equal.

**Lathe.**—Sam'l. T. Williams, Engr., 8 E. Lexington St., Baltimore, Md.—Wants small lathe, 8 to 12 in. swing, plain or screw cutting lathe, prefer foot power, but could use one with countershaft.

**Lighting Fixtures.**—John K. Jameson, Bald Knob, Ark.—Wants prices on lighting fixtures for \$4500 residence.

**Limestone.**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on limestone for \$25,000 orphans' home, New Market, Va.

**Limestone.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on limestone for \$1,000,000 apartment building.

**Limestone.**—Foster & Creighton Co., Contractors, Seventh Ave. North, Birmingham, Ala.—Wants prices on limestone for \$100,000 warehouse.

**Limestone.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on limestone for 11-story apartment building.

**Limestone.**—Pond & Pond, Martin & Lloyd, Archts., 6 N. Michigan Ave., Chicago, Ill.—Want prices on limestone for school building, Benham, Ky.

**Lumber.**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids December 29 to furnish lumber, delivery Quantico, Va.; Sch. No. 329.

**Mail Chutes.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on mail chutes for \$1,000,000 apartment building.

**Mail Chutes.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on mail chutes for 11-story apartment building.

**Marble.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on marble for 11-story apartment building.

**Marble.**—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, Fla.—Wants prices on marble for \$350,000 theater building at Lakeland.

**Marble.**—Charles S. Mueri, 3609 Hartford St., St. Louis, Mo.—Wants prices on marble for \$100,000 24-family apartment building.

**Marble.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on marble for \$1,000,000 apartment building.

**Marble.**—Bank of Carson, Inc., Carson, Va.—Wants prices on marble for bank building.

**Metal Bottle Top.**—Clyde A. Glougie, Nampa, Idaho.—Wants to contract for manufacture of patented bottle top, to be made of white metal.

**Metal Cellings.**—Robt. L. White, Lebanon, Tenn.—Wants prices on metal doors.

**Metal Cellings.**—Chas. H. Baxter, 230 Peck Ave., San Antonio, Tex.—Wants prices on metal cellings for 20 frame bungalows.

**Metal Cellings.**—W. S. Thornton, Carbon Hill, Ala.—Wants prices on metal cellings for theater building.

**Metal Doors.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on metal doors for \$1,000,000 apartment building.

**Metal Doors.**—G. Herbert French, Archt., 21 Southern Bldg., Tampa, Fla.—Wants prices on metal doors for garage.

**Metal Doors.**—Robt. L. White, Lebanon, Tenn.—Wants prices on metal doors for \$3500 to \$5000 dwellings.

**Metal Doors.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on metal doors for 11-story apartment building.

**Metal Doors, Sash and Trim.**—James M. Workman and J. H. de Sibour, Archts. and

Engrs., 111 N. Greene St., Greensboro, N. C.—Wants prices on metal doors and steel sash and trim for \$300,000 theater building.

**Metal Doors, Sash and Trim.**—Foster & Creighton Co., Contrs., Seventh Ave., North Birmingham, Ala.—Wants prices on metal doors and steel sash and trim for \$100,000 warehouse.

**Metal Doors, Sash and Trim.**—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, Fla.—Wants prices on metal doors and steel sash and trim for \$350,000 theater building, Lakeland.

**Miscellaneous Supplies.**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids Dec. 17 and Dec. 20 to furnish miscellaneous supplies; delivery Quantico, Va. Sch. No. 317 and Sch. No. 314.

**Miscellaneous Supplies.**—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Receives bids Dec. 17 to furnish structural steel, springs, bolts, hydraulic gauges, sash-operating devices, brass racks, steel conduit elbows, copper wire, electric water heaters, relays, condensers, glass globes, graphite, lead and cotton sleeving, rubber bandages, crocus cloth, oil cloth, etc. Blank forms and information (Circular 2429) on application to offices of Panama Canal; Asst. Purchasing Agents at Fort Mason, San Francisco, Cal.

**Mop Wringers.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 20 for 86 all-steel construction mop wringers, S. C. Lawler's No. 2 Janitor Special or equal.

**Motors.**—Machinery Record, Box 733, Richmond, Va.—Wants one 5 h.p., 900 r.p.m., one 15 h.p., 750 r.p.m. and one 25 h.p., 1200 r.p.m. motors, 3 phase, 60 cycle, 220 volt.

**Oil Burners.**—Chesterfield Realty Co., Box 1063, Richmond, Va.—Wants oil burners, suitable to be used in manufacturing plants where city gas supplies are not available; heat to be used in manufacturing process, such as tin cans and boxes.

**Operating Machinery for Locks.**—U. S. Engineer Office, Box 72, Louisville, Ky.—Receives bids January 3, 1927, to furnish and deliver operating machinery for Locks Nos. 47, 50, 51, 52 and 53, Ohio River.

**Paints, etc.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 17 for 500 qts. flat white paint; 600 cans white paint; 24 tubes yellow ochre.

**Paint Supplies.**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids December 20 to furnish paint supplies, etc.; delivery Quantico, Va. Sch. No. 321.

**Pans (Dish).**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids December 22 to furnish 1000 dish pans; delivery Philadelphia, Pa. Sch. No. 322.

**Paper.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids Dec. 20 for 1600 lbs. (40 rolls) smooth finish, buff color paper, weight about 40 lbs.; also 1440 lbs. (36 rolls), weight approximately 48 lbs. to roll, 8 in.

**Paper Bags, etc.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 18 for 450,000 of 5-lb., and 50,000 of 25-lb. Kraft paper bags; 250,000 paper napkins, 16x22 in., and 2,000,000 paper napkins, size 13x13 in.; 8789 lbs. typewriter paper; 150 doz. paper tablets; 449 lbs. writing paper; 700,000 paper cups, etc.

**Paper Boxes.**—R. J. Garrett, Jr., Manufacturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants process on paper boxes for cosmetics.

**Paper Box Machinery.**—Day Manufacturing Co., Luther A. Day, Sherman, Tex.—Wants data and prices on one 48-in. power cutter, one Model B, S. & S. covering machine, one 16-in. power stripping machine, one double scorer, Hobbs or Knowlton, one 5-in. corner cutter, one slitter and rewinder.

**Paving.**—Cotulla, Tex. See Construction News—Roads, Streets, Paving.

**Pipe (Wrought Iron).**—Contractor, Room 302-A, 1947 Broadway, New York City—Wants two carloads wrought iron pipe, from 2 to 12 in., inclusive.

**Plaster Board.**—Foster & Creighton Co., Contrs., Seventh Ave. North, Birmingham, Ala.—Wants prices on plaster board for \$100,000 warehouse.

**Plaster Board.**—J. R. Jordan, 827 S. Pryor St., Atlanta, Ga.—Wants prices on plaster board for \$12,000 dwelling.

**Plaster Board.**—R. A. Heavner, Jackson, Tenn.—Wants prices on plaster board for 80 dwellings, Bemis, Tenn.

**Plaster Board.**—Chas. Bauer, 2705 Travis St., Houston, Tex.—Wants prices on plaster board for \$10,000 duplex.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

**Polish (Metal and Paste).**—Marine Corps, Quartermasters Dept., Washington, D. C.—Receives bids December 27 to furnish 18,000 cans polish, metal, paste; delivery Philadelphia, Pa. Sch. No. 327.

**Portland Cement.**—Paama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Receives bids Dec. 30 to furnish Portland cement. Blank forms and information (Circular 1774) on application to offices of Panama Canal; Asst. Purchasing Agents at Fort Mason, San Francisco, Cal.

**Power Cutter.**—See Paper Box Machinery. **Pump.**—See Water Works.

**Refrigerating Machinery, etc.**—Board of Awards, F. A. Dolfeld, City Register, Baltimore, Md.—Receives bids December 22 for installation of refrigerators, refrigerating machinery and drinking fountains in Baltimore City Hospitals, Eastern Ave. extended; C. H. Osborne, Ch., Bureau of Buildings.

**Road.**—State of Oklahoma will build 10 roads. See Construction News—Roads, Streets, Paving.

**Road.**—State of Alabama will build 5 roads. See Construction News—Roads, Streets, Paving.

**Road.**—State of Kentucky will build 26 roads. See Construction News—Roads, Streets, Paving.

**Road.**—State of Texas will build 10 roads. See Construction News—Roads, Streets, Paving.

**Road.**—State of Virginia will build 4 roads. See Construction News—Roads, Streets, Paving.

**Rolling Partitions.**—B. L. Burford, Gen. Sec., Y. M. C. A., Greenville, Miss.—Wants prices on rolling partitions for \$21,000 building.

**Rolling Partitions.**—Charles S. Mueri, 3609 Hartford St., St. Louis, Mo.—Wants prices on rolling partitions for \$100,000 24-family apartment building.

**Roofing (Composition).**—B. L. Burford, Gen. Sec., Y. M. C. A., Greenville, Miss.—Wants prices on composition roofing for \$21,000 building.

**Roofing (Composition).**—G. H. French, Archt., 21 Southern Bldg., Tampa, Fla.—Wants prices on composition roofing for garage.

**Roofing (Composition).**—J. R. Jordan, 827 S. Pryor St., Atlanta, Ga.—Wants prices on composition roofing for \$12,000 dwelling.

**Roofing (Composition).**—Herbert Aston, Church and Market Sts., Knoxville, Tenn.—Wants prices on composition roofing for stores building.

**Roofing (Composition).**—Foster & Creighton Co., Contrs., Seventh Ave. North, Birmingham, Ala.—Wants prices on composition roofing for \$100,000 warehouse.

**Roofing (Composition).**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on composition roofing for 11-story apartment building.

**Roofing (Composition).**—Pond & Pond, Martin & Lloyd, Archts., 6 N. Michigan Ave., Chicago, Ill.—Wants prices on composition roofing for school building, Benham, Ky.

**Roofing (Tile and Metal).**—W. S. Thornton, Carbon Hill, Ala.—Wants prices on metal and tile roofing for theater building.

**Roofing (Composition).**—Herbert Aston, Empire Bldg., Knoxville, Tenn.—Wants prices on composition roofing for store building.

**Roofing (Composition).**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on composition roofing for \$25,000 orphans' home, New Market, Va.

**Roofing (Composition).**—James Knox Taylor, 100½ Lafayette St., Tampa, Fla.—Wants prices on composition roofing for \$120,000 Sunday school.

**Roofing Tile.**—James M. Workman and J. H. de Sibour, Archts. and Engrs., 111 N. Greene Sts., Greensboro, N. C.—Wants prices on roofing tile for \$300,000 theater building.

**Roofing Tile.**—Chas. H. Baxter, 230 Peck Ave., San Antonio, Tex.—Wants prices on roofing tile for 20 frame bungalows.

**Roofing Tile.**—J. R. Jordan, 827 S. Pryor St., Atlanta, Ga.—Wants prices on roofing tile for \$12,000 dwelling.

**Roofing Tile.**—Robt. L. White, Lebanon, Tenn.—Wants prices on roofing tile for \$3500 to \$5000 dwellings.

**Rubber Coats.**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids December 28 to furnish 4200 rubber coats, delivery Philadelphia, Pa.; Sch. No. 330.

**Sample Cases.**—R. J. Garrett, Jr., Manu-

facturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants prices on sample cases.

**School Furniture and Equipment.**—Board of Awards, F. A. Dolfeld, City Register, Baltimore, Md.—Receives bids December 22 for furniture and equipment, including domestic science equipment; furniture and supplies for Department of Education; equipment and supplies for Industrial Arts; John H. Roche, Sec., Board School Commrs.

**Shellac, etc.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 29 for 180 cans shellac substitute; 252 cans shellac varnish; 348 cans wood stains; 500 cans turpentine; 24 cans general interior varnish, and 100 cans spar varnish.

**Septic Tank.**—John K. Jameson, Bald Knob, Ark.—Wants prices on septic tank.

**Sewers.**—City of Macon, Miss., Mary B. Scott, Clk.—Receives bids January 4 for sanitary sewer system, 44,000 ft. of pipe sewers, 8 to 10 in. in diam., 105 manholes and 8 flush tanks; Murphey & Watts, Engrs.

**Sewers.**—City of Ruston, La.—Receives bids January 4 for construction of approximately 30,000 ft. of 8 and 10 in. sewer mains and 3 disposal plants; E. T. Archer & Co., Engrs., City Bank Bldg., Shreveport.

**Sewers.**—City of Orlando, Fla., J. A. Stinson, Clk.—Receives bids Dec. 22 for installing sanitary sewers on Lake View Ave., from Ivanhoe Blvd. to Edgewater Drive.

**Shovel and Crane.**—Machinery Record, Box 733, Richmond, Va.—Wants one No. 37 Marion crawler-type combination steam shovel and crane.

**Sewer.**—U. S. Veterans Bureau, Room 791, Arlington Bldg., Washington, D. C.—Receives bids Jan. 18 for new sewer line at U. S. V. Hospital No. 96, Sunmount, N. Y.

**Sewers.**—City of Chillicothe, Mo., Elmer C. Johnson, Auditor—Receives bids Dec. 27 for sewer in District No. 9.

**Sidewalks.**—Hazlehurst, Ga. See Construction News—Roads, Streets, Paving.

**Sprinkler System.**—James M. Workman and J. H. de Sibour, Archts. and Engrs., 111 N. Greene St., Greensboro, N. C.—Wants prices on sprinkler system for \$300,000 theater building.

**Sprinkler System.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on sprinkler system for 11-story apartment building.

**Sewers.**—District Commrs., Washington, D. C.—Receives bids Dec. 21 for 5373 ft. of sewer, 3 to 10 in. in diam.

**Steel Dredge Pipe and pontoons.**—Office of Dist. Engineer, Mississippi River Comm. Dredging Dist., Box 1017, Memphis, Tenn.—Receives bids Dec. 30 to furnish and deliver 550 ft. of 32-in. diam. steel dredge pipe and 11 steel dredge pontoons.

**Steel Sash.**—Pont & Pond, Martin & Lloyd, Archts., 6 N. Michigan Ave., Chicago, Ill.—Wants prices on steel sash for school building, Benham, Ky.

**Steel Sash and Trim.**—B. L. Malone, 411 Second Ave., Albany, Ala.—Wants prices on steel sash and trim for \$35,000 store building.

**Steel Sash and Trim.**—G. Herbert French, Archt., 21 Southern Bldg., Tampa, Fla.—Wants prices on steel sash and trim for garage.

**Steel Sash and Trim.**—Robt. L. White, Lebanon, Tenn.—Wants prices on steel sash and trim.

**Steel Sash and Trim.**—Bank of Carson, Inc., Carson, Va.—Wants prices on steel sash and trim for bank building.

**Steel Sash and Trim.**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on steel sash and trim for \$25,000 orphans' home, New Market, Va.

**Steel Sash and Trim.**—James Knox Taylor, 100½ Lafayette St., Tampa, Fla.—Wants prices on steel sash and trim for \$120,000 Sunday school.

**Stripping Machine.**—See Paper Box Machinery.

**Street.**—Cedar Grove, La. See Construction News—Roads, Streets, Paving.

**Tank (Locomotive).**—The Winnsboro Granite Corp., B. H. Heyward, Gen. Mgr., Rion, S. C.—Wants locomotive tank, capacity about 4000 gal.

**Tank and Tower.**—See Water Works.

**Terra Cotta Trim.**—Chas. H. Baxter, 230 Peck Ave., San Antonio, Tex.—Wants prices on terra cotta trim for 20 frame bungalows.

**Terra Cotta Trim.**—Herbert Aston, Empire Bldg., Knoxville, Tenn.—Wants prices on terra cotta trim for store building.

**Terra Cotta Trim.**—William H. Smith-Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on terra cotta trim for \$1,000,000 apartment building.

**Terra Cotta Trim.**—Herbert Aston, Church and Market Sts., Knoxville, Tenn.—Wants prices on terra cotta trim for stores building.

**Terra Cotta Trim.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on terra cotta trim for 11-story apartment building.

**Textiles.**—Marine Corps, Quartermaster's Dept., Washington, D. C.—Receives bids January 4 to furnish 35,000 yds. unbleached canton flannel; delivery Philadelphia, Pa.; Sch. No. 328.

**Textiles.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 16 for 100 yds. coarse stitch canvas, 120 yds. Russia crash, 40 yds. cotton crepe, 100 yds. satine, etc.

**Tile.**—Bank of Carson, Inc., Carson, Va.—Wants prices on vault lights for Carson, Va., bank building.

**Tile.**—James Knox Taylor, 100½ Lafayette St., Tampa, Fla.—Wants prices on hollow tile for \$120,000 Sunday school.

**Tile.**—Chas. H. Baxter, 230 Peck Ave., San Antonio, Tex.—Wants prices on hollow and interior tile for 20 frame bungalows.

**Tile.**—William H. Smith-Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on hollow, interior and flooring tile for \$1,000,000 apartment building.

**Tile.**—Foster & Creighton Co., Contrs., Seventh Ave. North, Birmingham, Ala.—Wants prices on hollow and interior tile for \$100,000 warehouse.

**Tile.**—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, Fla.—Wants prices on hollow, interior and flooring tile for \$350,000 theater building at Lakeland.

**Tile.**—Robt. L. White, Lebanon, Tenn.—Wants prices on interior tile for \$3500 to \$5000 dwellings.

**Tile Letters.**—Southern States Equipment Co., Inc., 712 Canal-Commercial Bldg., New Orleans, La.—Wants data on tile letters for street names; correspond with manufacturers.

**Tin and Wire Novelties.**—Alexander MacDougall, 1919 Court St., Baker, Oregon.—Wants data from manufacturers on tin and wire novelties.

**Tools (Woodcarving).**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids Dec. 17 for woodworking tools, the Loeffler Craft tools or equal.

**Towboat.**—U. S. Engineer Office, 428 Custom House, St. Louis, Mo.—Receives bids Jan. 20 for one 110-ft. steel hull Diesel-electric towboat.

**Transformers.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 18 for two 50-kva. transformers, 2300 volt to 113/230 volt, single phase, 60 cycle, complete with primary fuse cut-outs and oil; Westinghouse, General Electric or equal.

**Tug.**—U. S. Engineer Office, Mobile, Ala.—Receives bids Feb. 7, 1927, to construct and deliver one 100-ft. Diesel-electric harbor tug.

**Vaults.**—Bank of Carson, Inc., Carson, Va.—Wants prices on vaults for \$10,000 bank building.

**Vault Lights.**—Herbert Aston, Empire Bldg., Knoxville, Tenn.—Wants prices on vault lights for store building.

**Vault Lights.**—Bank of Carson, Inc., Carson, Va.—Wants prices on vault lights for bank building.

**Vault Lights.**—Charles S. Mueri, 3609 Hartford St., St. Louis, Mo.—Wants prices on vault lights for \$100,000 24-family apartment building.

**Ventilators.**—Herbert Aston, Church and Market Sts., Knoxville, Tenn.—Wants prices on ventilators for stores building.

**Ventilators.**—Samuel L. Matz, Pres. Matz Realty Co., Willow Terrace Apts., Louisville, Ky.—Wants prices on ventilators for 11-story apartment building.

**Ventilators.**—Charles S. Mueri, 3609 Hartford St., St. Louis, Mo.—Wants prices on ventilators for \$100,000 24-family apartment building.

**Ventilators.**—Herbert Aston, Empire Bldg., Knoxville, Tenn.—Wants prices on ventilators for store building.

**Ventilators.**—James M. Workman and J. H. de Sibour, Archts. and Engrs., 111 N. Greene

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



St., Greensboro, N. C.—Want prices on ventilators for \$300,000 theater building.

**Ventilators.**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on ventilators for \$25,000 orphans' home, New Market, Va.

**Water System.**—John K. Jameson, Bald Knob, Ark.—Wants prices on water system for \$4500 residence.

**Water Works.**—Bureau of Yards and Docks, Navy Yard, Washington, D. C.—Receives bids December 22 for deferrization plant at Annapolis, Md.; plant consists of timber aerator, motor-driven centrifugal pump, chemical feeds, pressure filter, elevated wood tank with steel tower, housing over equipment, piping and accessories and connections to existing water mains at Naval Academy (Marine Barracks).

**Wax.**—R. J. Garrett, Jr., Manufacturing Co., Inc., 932 W. Pearl St., Jackson, Miss.—Wants prices on wax.

**Wheels (Fordson Tractor) and Equipment.**—W. E. Toler, Pawnee, Okla.—Wants catalogs and prices on different types of Fordson tractor wheels, holsts and equipment; with view to representation.

**Wire Glass.**—William H. Smith-Nelson Cunliff Co., Contrs., 110 N. Seventh St., St. Louis, Mo.—Wants prices on wire glass for \$1,000,000 apartment building.

**Wire Glass.**—C. Herbert French, Archt., 21 Southern Bldg., Tampa, Fla.—Wants prices on wire glass for stores building.

**Wire Glass.**—G. A. Miller, Builder, 28-29 Market Sts., Knoxville, Tenn.—Wants prices on wire glass for store building.

**Wire glass.**—G. A. Miller, Builder, 28-29 Petteway Bldg., Tampa, Fla.—Wants prices on wire glass for \$350,000 theater building at Lakeland.

**Wire Glass.**—Robt. L. White, Lebanon, Tenn.—Wants prices on wire glass for \$3500 to \$5000 dwellings.

**Wire Rope.**—Contractor, Room 302-A, 1947 Broadway, New York City—Wants 2000 ft. of 1½-in and 2¼ diam. new or used wire rope; state lengths.

**Window Shades.**—U. S. Veterans Bureau, Supply Division, Room 791, Arlington Bldg., Washington, D. C.—Receives bids December 28 to furnish and install window shades at U. S. Veterans Hospital, Fort Snelling, Minn.

**Wire Glass.**—Herbert Aston, Empire Bldg., Knoxville, Tenn.—Wants prices on wire glass for store building.

**Wire Glass.**—James M. Workman and J. H. de Sibour, Archts. and Engrs., 111 N. Greene St., Greensboro, N. C.—Want prices on wire glass for \$300,000 theater building.

**Wire Glass.**—Walter Sibert, 31-32 Nusbaum Bldg., Norfolk, Va.—Wants prices on wire glass for \$25,000 orphans' home, New Market, Va.

**Wire Glass.**—B. L. Burford, Gen. Sec., Y. M. C. A., Greenville, Miss.—Wants prices on wire glass for \$21,000 building.

**Wire Rope.**—Marine Corps, Quartermaster's Department, Washington, D. C.—Receives bids December 22 to furnish 1000 ft. of wire rope, delivery Quantico, Va. Sch No. 326.

**Wire Glass.**—Bank of Carson, Inc., Carson, Va.—Wants prices on vaults for \$10,000 bank building.

**X-Ray Dental Unit, etc.**—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids December 20 for one dental X-Ray unit, 110 volt, A. C., 60 cycle, complete with safety guard, etc.; also 4000 pkgs. X-Ray developing powder, 1 gal. size.

#### Ryerson Buys Warehouse at Cleveland.

Joseph T. Ryerson & Son, Inc., whose iron, steel and machinery warehouses and general offices are in Chicago, Ill., have purchased the warehouse division and property of the Bourne-Fuller Company at Cleveland, Ohio. The acquired property consists of a group of large modern warehouses, with 200,000 square feet of ground area. The plant is stocked with a complete line of bars, shapes, plates, sheets and steel products—about 12,000 tons in all. The purchasers will immediately add to the facilities and increase the size and range of the stock carried; they will also add other products. This will be the ninth Ryerson plant. The Bourne-Fuller Company, which is a large steel producer, will concentrate activities upon the manufacture of its line of products.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

## Trade Literature

### Money Saving by Heat Regulation.

The Powers Regulator Company, 2720 Greenview avenue, Chicago, Ill., manufacturers of automatic temperature-controlling apparatus, have published a book of 50 pages entitled "Shop and Office Temperatures," which presents to the reader an abundance of evidence of the great value of the Powers temperature-control system. It is understood that some users of the apparatus have reported that it has paid for itself in three or four years, while others consider that it has paid for itself within a year. By eliminating overheating and keeping shops and offices at healthful temperatures, it is claimed that a saving of from 15 to 48 per cent can be made as to fuel and the workers can do more and better work. The book is illustrated.

### High Point and Its Many Industries.

"Information About High Point, N. C." is the title of a booklet of 28 pages published by the Chamber of Commerce of that city. High Point is about halfway from Washington to Atlanta and in the center of the Piedmont industrial section of the state. It has 125 manufacturing plants, with an output of \$50,000,000 a year, and it is stated: "Woodworking and furniture, the early enterprises of High Point, have been equaled in the last few years by textile mills, and along with these have come iron works, street-car factory, machine shops, flour mills, brick manufacturers, glass factories, silk mills, and many others." There is a total of 14,000 workers, with annual aggregate payroll of \$18,000,000. Both letterpress and pictures tell the story of success.

### American Blower Air Filter.

The American Blower Air Filter is the subject of treatment in Bulletin No. 2223 issued by the American Blower Company of Detroit, Mich. Distinctive advantages claimed for this filter are dry plate, constant effect, constant efficiency, constant air flow; it can be instantly unloaded, light in weight, fireproof, non-corrosive, temperature resistant, imperishable, large-load capacity and non-fouling. Three illustrations on the first page show the construction of the filter and the method of using it. Pictures within show the way the filter operates, and there is complete description of its thoroughness in operation.

### Fine Cornell Iron Works Book.

The Cornell Iron Works, Inc., of Long Island City, N. Y., has published a new and finely illustrated catalogue about its steel rolling shutters and doors. It is sent to those who desire it upon request. It fully describes steel rolling doors and labeled Underwriters' rolling fire doors, including details of construction, with full dimensions and specifications. The book covers 50 actual installations of these Cornell doors in clubs, restaurants, stores, factories, warehouses, etc. It is a very attractive publication.

### "Armco" Products in Print.

Volume 3, No. 10, of Ingot Iron Shop News, issued by the American Rolling Mill Company, Middletown, Ohio, contains many interesting and impressive facts concerning the "Armco" ingot iron culverts and other products manufactured there. It is a breezy, stimulating publication—one which stands for the use of superior materials and superior manufacture.

### Mack Buses Yesterday and Today.

The International Motor Company, 25 Broadway, New York, has lately put out a bus catalogue, No. 95, and also a pamphlet describing the Mack six-cylinder bus. These are new publications. Catalogue No. 95 is a recent revised edition and the other catalogue is the first one this company has issued on the six-cylinder bus. The latter is designated Pamphlet No. 61. The first of these two books is a comprehensive publication concerning the Mack buses, the first of which was delivered in the year 1900. It ran seven years as a bus and nine years more as a truck. The book gives full particulars about the construction of these vehicles today, with pictures of the different parts as well as of the complete buses. A richly colored blue-paged bulletin gives more information, as does the No. 61 bulletin on the De Luxe type.

### Booklet About Inverness, Fla.

The Inverness Company, J. Fred Roscow, Jr., general manager, Inverness, Fla., has issued a very attractively illustrated booklet about Inverness, which is the county seat of Citrus County, in the highlands of the state, and the region is noted for the excellence of its oranges and grapefruit. It is reached by both the Atlantic Coast Line and the Seaboard Air Line railways, and it is a well-established town that, it is observed, is being remodeled. The company is engaged in the sale of lots for residences and for business purposes and also in the sale of farms in units of 10 acres. The idea is to develop a small city community with fine homes and surrounded by a belt of productive farms and citrus groves. The booklet gives full particulars.

### Calendars 1927.

Several interesting and useful calendars for 1927 have been received by the MANUFACTURERS RECORD, including a large wall calendar from the Traylor Engineering and Manufacturing Company, Allentown, Pa., this being illustrated and having three months to a page; one from the Draper Corporation, textile machinery, Hopedale, Mass., this being a tasteful hanger calendar in colors; Henry A. Kries & Sons Company, Baltimore, Md., steam and mill supplies, a hanger calendar with a very artistic portrait in colors, and Chesapeake Steamship Company, Baltimore, Md., a large and fine wall calendar, three months to a page, the whole done in red and blue.

### Ohio Electric Bulletin.

Bulletin 205 of the Ohio Electric and Controller Company, Cleveland, Ohio, illustrates and describes fully its Ohio ball-and-sleeve-bearing motors that are ventilated by an efficient forced draft, which showed a movement of six cubic feet of air per minute by anemometer test. These motors, it is stated, are built to a high, well-defined standard by experienced workmen, and every motor must pass several rigid tests before it is put on the market. Details of construction are described and illustrated.

### Solvay Sales Organization Change.

The Solvay Process Company of Syracuse, N. Y., has announced that on January 1 a new company, known as the Solvay Sales Corporation, will, as principal, become the exclusive distributor of its products. On the same date the new corporation will, it is stated, acquire the entire business of Wing & Evans, Inc., and will assume their contracts covering the Solvay products. This new corporation will take over the entire personnel of the firm, and all their offices and branches will be continued.

### Tampa's Advantages for Textile Interests.

F. P. Lyons, who operates a structural-steel fabricating plant in New Hampshire, and is now investing about \$75,000 in building an iron works in Tampa for architectural and ornamental iron work, including steel structures, bridges, etc., writes very enthusiastically about that city and the opportunities it affords for industrial development and especially for the textile industry. In the course of his letter Mr. Lyons says:

"Having made a thorough study of the textile industry, and especially cotton, I cannot understand why manufacturers will continue to invest in cotton mills in the New England States when we consider costs due to being so far removed from their raw material and carrying large stocks in their warehouses and fuel which must be put in in the summer. This amount of capital alone tied up with excess freight rates would more than offset any investment that might be made in the South with a modern mill.

"There is no question but that New England has some advantages, and I think this may be in the woolen industry. It is true they have efficient labor, but the mills have not kept pace with modern equipment in a number of communities, and have paid most of their earnings out in interest on investment, and now it is too late even to think that New England can continue to compete.

"There is a great possibility in Tampa for a large textile concern; cotton can be brought in ships from Galveston and New Orleans and other points, and the finished material shipped out by boat to Baltimore, Philadelphia, New York and Boston and to every part of the United States and to South American countries at a much lower cost than from the middle Southern States, as railroad transportation cannot compete.

"Tampa is the ideal location for a textile plant because of sunshine the year around, and has an ideal contented labor market, with every advantage offered by its financial interests.

"In a recent letter I stated that I thought Tampa would double its population in the next three to five years, and if it could have the co-operation of such a magazine as you publish I could almost say three times the population rather than twice, because the industrial opportunities here are unlimited."

### Magnolia Company Orders 60,000 Tons of Pipe.

The Magnolia Petroleum Company of Dallas, Texas, wires the MANUFACTURERS RECORD confirming the purchase of 50,000 to 60,000 tons of 10-inch pipe for the installation of an oil line from the Texas Panhandle to the Gulf coast. The order was placed with the National Tube Company of Pittsburgh, Pa., and it is understood that the Humble Oil Company of Houston, Texas, and the Gulf Refining Company of Pittsburgh, Pa., and Port Arthur, Texas, are also interested in the transaction.

### Construction Begins on \$500,000 School.

Lexington, Ky.—Construction has started on the proposed high school to be erected in this city at a cost of \$500,000, including \$100,000 for equipment and furnishings. The structure will be 370 by 175 feet, 4 stories with full basement, concrete, brick and steel, concrete foundations, hardwood and concrete floors and built-up roof. Franz C. Warner and W. R. McCormack of Cleveland, Ohio, are the architects, and R. W. McMeekin of Lexington, engineer. General contract has been awarded to the J. T. Jackson Lumber Company of Lexington.

### Will Build \$250,000 Hospital at Guthrie.

Guthrie, Okla.—Plans have been prepared by Edward Louis Gahl, Oklahoma City, for a \$250,000 hospital to be erected here by the Oklahoma Methodist Episcopal Hospital and Nurses School. The structure will be L-shaped, four stories and basement, fireproof, of reinforced concrete, brick and stone. Campbell & Price of Oklahoma City, contractors, will take bids on sub-contracts and materials.

### Birmingham Plans to Expend \$3,500,000 for Improvements in 1927.

Birmingham, Ala.—According to estimates of the city engineer, Birmingham will expend approximately \$3,500,000 in 1927 for public improvements, the major portion of which will involve the further development of the boulevard system, including the construction of several relief highways to parallel present congested thoroughfares. One of these, about 70 per cent completed, will provide an additional outlet to Woodlawn and East Lake. Sanitary sewers will also constitute an important item in the year's program. Expenditures for 1926, ending at the close of the fiscal year, October 1, amounted to more than \$3,000,000.

### "Prohibition Is Not a Pendulum."

[From Hattiesburg American.]

Although speaking at the time directly to the members and guests of the "Lions Club" of Biloxi, Miss., Capt. S. P. Edmonds, coast guard commandant of Base 15 at Biloxi, well may have been looking directly at every man, woman and child in the United States, especially Federal, state, county and municipal officials of every degree and rank, when he said:

"As to the subject of law enforcement, everyone knows that law enforcement and its corollary, law observance, are foundation stones of our natural life, and, therefore, are fundamental of 'Our Nation's Safety.' In fact, the need for law enforcement is an axiom, and, as you all know, an axiom is defined in our old school books as a self-evident proposition and needs no further demonstration or discussion."

And equally axiomatic, as Captain Edmonds really said in linking law observance with law enforcement, is the need for law observance. Indeed, if either of these great factors in the national safety and welfare is greater than the other, voluntary law observance very probably will outweigh compulsory law enforcement.

At all events, this paragraph from Captain Edmonds' address on "Our Nation's Safety" should be pondered and absorbed by every man, woman and child in the country, and above all—it is sad and humiliating to have to say—by Federal, state, county and municipal officials of every degree and rank. It is a serious condition, in which a large percentage of the people, including public officials sworn to support the Constitution and the laws, are compelled to law observance through law enforcement; it is even more serious that many of those sworn to law enforcement do not even practice law observance. Only through law observance, and law enforcement when necessary, can "Our Nation's Safety" be assured.

As one of those officials who conscientiously strive to enforce the law, the views of Captain Edmonds on Prohibition also are of interest and weight. As commandant of Base 15 he has done most commendable work in suppression of illegal liquor traffic; his energy and his bravery have been conspicuous, and his words must be accepted as those of a true, upstanding American citizen and officer.

"Just as we, whose fathers fought and suffered for the South, now agree that slavery as an institution can have no recognition on our statute books, so will future generations find and agree that the drink habit, with its recognized elements of weakness and injury to our social and political fabric, was rightly outlawed," said Captain Edmonds. And he added:

"I am glad to be able to say that in my private and personal opinion Prohibition has come to stay.

"You who have 'Our Nation's Safety' as your motto may well rejoice since this great principle has been added to the character-forming elements of our day and generation. It is not a pendulum to swing back again, but is progress—nothing less. As Prohibition has been advancing constantly for a much longer time than the Prohibition law has been in existence, we can rest assured that it will continue to advance with increasing momentum."

This simple, direct, unornamental statement cannot be successfully converted.

And to such men as Captain Edmonds is due great credit for the fact that Prohibition already is established and is stable, and not vacillating like the pendulum of which he speaks.



## Kelly Kats—for trucks that must be punctual

Heavy loads are hard on ordinary solid tires even on the smoothest of city pavements and when heavily-loaded trucks have to travel at a comparatively high speed it takes a mighty good tire to stand up under the strain. For trucks that must deliver their loads on time no matter what the road conditions Kelly Kat tires will carry them through at an unusually low cost per mile.

Kelly Kats are made of tough, durable rubber that will stand up under hard usage. They will carry heavy loads without regard to the roads they must travel over and without excessive wear. Kelly Kats will carry your trucks forward just as long as the engine has power enough to move the truck. The side vents, originated and perfected by Kelly, give Kelly Kats a grip that eliminates slipping and sliding and enables the tires to use all the power the engine gives them to carry the truck and its load to their destination.

You will find that once a truck owner uses Kellys he seldom will have any other tire on his trucks. That's because the cost per mile of Kelly Kats is unusually low.

**KELLY-SPRINGFIELD TIRE CO.**

250 West 57th Street

New York, N. Y.



*Wherever a truck may be called upon to go you can be more sure of it getting there without any delay if it is riding on Kellys.*



## FINANCIAL NEWS

## Bond Issues Proposed

Ala., Huntsville—School—City plans calling election on \$75,000 bonds; E. R. Matthews, Clk.-Treas.

Fla., Clearwater—School—Pinellas County School Board may call election on \$35,000 Special School Dist. No. 1 bonds.

Fla., Coral Gables—Municipal Improvement—City, Edwin G. Bishop, Clk., voted \$4,532,000 bonds: \$1,750,000, golf course; \$200,000, swimming pool; \$1,782,000, acquiring steel railway and bus system; \$300,000, auditorium; \$100,000, public parks and playgrounds; \$100,000, additional fire station; \$50,000, emergency hospital; \$250,000, city hall.\*

Fla., Coronado Beach—Paving, Sewer—City, F. P. Klinder, Clk., advises regarding bids received Dec. 7 on \$94,000 6% \$1000 denom. bonds: "Not sold."\*

Fla., Orlando—School—Orange County Board of Public Instruction, James A. Knox, Chmn., receives bids Jan. 4 for \$105,000 6% \$1000 denom. Special Tax School Dist. No. 6 (Ocoee) bonds.

Fla., Pensacola—Highway—Escambia County Commrs. received high bid from Frank H. Farnham, Pensacola, at par for \$30,000 bonds.

Fla., Pensacola—Paving—City Comm. plans about \$18,000 bond issue.

Fla., Sarasota—Highway—Sarasota County Commrs., J. R. Pencoek, Clk., receives bids Dec. 21 for \$681,000 6% bonds.

Ga., Brunswick—Road—Glynn County Commrs. will call election January 26 on \$250,000 bonds.\*

Ky., Hardinsburg—Road—Breckenridge County, Stanley Gray, Clk., voted \$250,000 bonds.

Ky., Lothair—School—Town voted bonds. Address Town Clk.

Ky., Paintsville—Road—Johnson County votes soon on \$300,000 bonds. Address County Commrs.

Ky., Prestonsburg—Road—Floyd County voted \$375,000 bonds. Address County Commrs.

La., Crowley—Road—Arcadia Parish Police Jury, J. D. Medlemka, Pres., receives bids Dec. 21 for \$150,000 6% bonds.

La., Winnfield—Water-Works, Sewer—Town, H. T. Willis, Clk., contemplates \$150,000 bond issue; Charles D. Evans, Consit. Engr., Levy Bldg., Shreveport, La.

Md., Baltimore—School—City, Howard W. Jackson, Mayor, may vote early next year on \$10,000,000 additional loan.

Miss., Jackson—Road—Hinds County Board of Suprvs. plans \$600,000 bond election.

Miss., Moss Point—Water-Works—City, C. M. Fairley, Clk., voted \$10,000 bonds.\*

Miss., Pascagoula—Road, etc.—Jackson County Suprvs., Dist. No. 4, voted \$60,000 bonds. Address County Commrs.\*

Miss., Jackson—City, Walter A. Scott, Mayor, receives bids Dec. 21 for \$1,000,000 \$1000 denom. bonds: \$250,000 water-works extension and improvement, \$750,000 general improvement. Lately noted bids about Jan. 15.

Mo., Cape Girardeau—Bridge—Wm. R. Compton & Co., 704 Locust St., St. Louis, Mo., receives bids soon for \$1,000,000 bonds as part of financing plan for bridge across Mississippi River at Cape Girardeau.

Mo., Liberty—Bridge—Clay County voted \$150,000 bonds, county's share toward Missouri River Bridge. Address County Commrs.\*

Mo., New Madrid—Water-Works, Sewer—City voted \$50,000 bonds. Address City Clk.\*

Mo., Warrenton—School—City plans \$15,000 bond issue. Address City Clk.

N. C., Durham—School—City, R. W. Riggsby, Mgr., voted \$1,250,000 bonds; M. B. Fowler, Sec., City Board of Education.\*

N. C., Franklin—Sewer—City, F. L. Bryson, Clk., defeated \$30,000 bond issue. Lately noted election Dec. 7.

N. C., Greensboro—Municipal Improvement—City, E. B. Jeffress, Mayor, receives bids Dec. 21 for \$1,420,000 bonds.

N. C., Shelby—Water Works—Board of Aldermen, Mrs. O. M. Suttle, Clk., plans \$50,000 bond issue.

Okla., Anadarko—Oil Engine—City voted \$40,000 bonds; H. E. Musson & Co., Engrs., Grain Exchange Bldg., Oklahoma City.\*

Okla., El Reno—Sewer—City may vote about middle of Jan. on \$10,000 bonds. Address City Mgr. Fassett.

Okla., Taloga—Electric Light and Power Plant—City votes soon on \$10,000 to \$15,000 bonds. Address City Clk.

S. C., Charleston—Highway—Commrs. of Middle Coastal Highway Dist., Jenkins M. Robertson, Chmn., receive bids December 15 at office of M. Rutledge Rivers, Atty., 28 Broad St., for \$750,000 5¼% \$1000 denom. bonds.

S. C., Greenwood—Road—Greenwood County Commrs. plan selling in Jan. \$500,000 of \$1,000,000 bonds.\*

S. C., McCormick—Bridge—McCormick County plans selling bonds for its share toward constructing bridge over Savannah River at Furey's Ferry. Address County Commrs.

S. C., Florence—Municipal Improvement—City, Mayor Gilbert, contemplates \$240,000 bond election for water and sewerage extension and sidewalks.

S. C., Florence—School—School Board may call election in Jan. on \$275,000 bonds.

Tenn., Crossville—Water Works—City voted \$100,000 bonds. Address City Clk.

Tenn., Jamestown—Road—Fentress County Commrs. receive bids soon for \$100,000 bonds.

Tex., Beaumont—Road—Jefferson County, B. V. Johnson, County Judge, contemplates bond issue.

Tex., Brownwood—Drainage—Water Conservation Dist., care of A. C. Bratton, Chmn., Chamber of Commerce, will call another election soon on \$1,500,000 bonds; J. H. Ross, Brady Bldg., San Antonio, and P. A. Welty, Wichita Falls, Engrs.

Tex., Corsicana—Levee—Navarro County Independent Levee Dist. No. 11, J. M. Bradley, Supvr., will call election soon on bonds.

Tex., Fort Worth—School—Fort Worth Dist. voted \$750,000 4¼% bonds; Forest Hill Independent School Dist. voted \$20,000 bonds. Address Pres. Board of Education.\*

Tex., Houston—Extend and Enlarge Facilities Ship Channel—Harris County Commrs. Court, Chester H. Bryan, County Judge, voted \$1,500,000 5% bonds.

Tex., Houston—Improvement—Trinity and Brazos River Valley Ry. Co., G. H. Peter, Engr., Houston, granted authority from Interstate Commerce Comm. to issue \$4,000,000 \$10,000 denom. third series receivers' certificates.

Tex., Mission School—Mission School Board may call election on \$85,000 bonds.

Tex., Pampa—Highway—Gray County, T. M. Wolfe, County Judge, will call election about February 1, tentative date, on \$1,200,000 bonds.\*

Tex., San Antonio—School—Board of Education, Paul H. Scholz, Bus. Mgr., will call election Feb. 19 on \$400,000 bonds.\*

Tex., Waco—Water Works—City Comm. authorized issuance of \$1,000,000 Lake Bosque bonds; Geo. D. Field, City Sec.

Tex., Victoria—School—Commrs. Victoria Independent School Dist. receive bids Jan. 13 for \$70,000 5% \$500 denom. bonds; V. L. Griffin, Pres., Victoria Junior College.

Va., Bristol—Paving, Indebtedness—City, John D. Keeler, Mgr., plans \$255,000 bond election.

Va., Clarendon—Water Works—Arlington County Board of Water Supply, Asa E. Phillips, Ch. Engr., receives bids Dec. 21 for \$540,000 4½% bonds. Lately noted bids Dec. 15.

W. Va., East Rainelle, Rainelle—Sewer, Incinerator, etc.—Town, W. O. Walker, Recorder, will call election January 6 on \$13,400 6% bonds.

## Bond Issues Sold

Ala., Opelika—Paving—City, Henry K. Dickinson, Mayor, sold \$40,000 6% bonds to Caldwell & Co., Age-Herald Bldg., Birmingham, at 100½ and accrued interest.\*

Ark., Blytheville—School—M. W. Elkins & Co., Little Rock, purchased \$22,000 Mississippi County Special Tax School Dist. No. 2, Luxora, bonds.\*

Ark., Lake Village—Levee—W. B. Worthen Co., 500 Main St., Little Rock, purchased \$350,000 Southeast Arkansas Levee Dist. bonds at 95.50.

Ark., Marianna—M. W. Elkins & Co., Southern Trust Bldg., Little Rock, purchased \$27,500 6% Special School Dist. bonds.

Ark., Texarkana—School—M. W. Elkins & Co., Little Rock, purchased \$45,000 6% Texarkana Special School Dist. bonds.

Fla., Auburndale—Street—City sold \$130,000 6% assessment bonds to E. P. McMakin & Co., 231 S. La Salle St., Chicago, Ill., at 95.\*

Fla., Bradenton—Paving Assessment—City, L. L. Hine, Clk., sold \$153,000 6% \$1000 denom. bonds to J. T. Tiggert, W. A. Hartman and Barnett National Bank, Jacksonville, at 98.55.\*

Fla., Clearwater—Road, Bridge—Pinellas County Commrs., K. B. O'Quinn, Sec., sold \$1,275,000 6% bonds to R. M. Grant & Co., Inc., 115 Broadway, New York, at \$1,239,172 and accrued interest.\*

Fla., Clearwater—Build and Equip County Poor Farm—Pinellas County Commrs., K. B. O'Quinn, Clk., sold \$200,000 6% bonds to Weil, Roth & Irving Co., Cincinnati, Ohio, at \$206,220 and accrued interest.\*

Fla., De Land—Road and Bridge—Volusia County Commrs., Samuel D. Jordan, Clk., sold \$325,000 Daytona Beach Special Road and Bridge Dist. bonds to Spitzer-Rorick Co., Toledo, Ohio, at 97.15 and accrued interest. Lately noted bids Oct. 25.

Fla., Gainesville—Improvement—City, Jos. E. Waugh, City Comptroller, sold \$370,000 5¼% bonds to John Nuveen & Co., 38 S. Dearborn St., Chicago, Ill., at par.\*

Fla., Key West—Highway, Bridge—Monroe County Commrs., D. Z. Filer, Clk., sold \$750,000 5¼% of \$2,650,000 bonds to Warren Watkins, representing Marx Co. of Birmingham, Ala., at 95 cents on dollar.\*

Fla., Lake Alfred—Special Assessment, Storm Sewerage—City sold \$152,000 6% bonds to McDonald Mortgage & Realty Co., Lakeland.

Fla., Orlando—School—Orange County Board of Public Instruction, A. B. Johnson, County Supt., sold \$190,000 5¼% Special Tax School Dist. No. 7, Oakland-Winter Garden bonds to Stranahan, Harris & Oatis Co., Toledo, Ohio.\*

Fla., Seabreeze—Boulevard—Trustees of Ocean Shore Improvement Dist., First National Bank, sold \$585,000 \$1000 denom. Series "B" bonds to L. R. Ballinger Co., Cincinnati, Ohio, at 95.81 and accrued interest.

Fla., Tampa—School—Hillsborough County Board of Public Instruction, W. D. F. Snipes, Sec., sold \$100,000 6% Special Tax School Dist. No. 31 bonds to W. L. Slayton & Co., Toledo, Ohio, and I. B. Tigrett & Co., Jackson, Tenn., at \$90,000 and accrued interest.\*

Fla., Tampa—School—Hillsborough County Board of Public Instruction, W. D. F. Snipes, Sec., sold \$25,000 6% Port Tampa Special School Tax Dist. bonds to Prudden & Co., Home Bank Bldg., Toledo, Ohio, at \$24,285 and accrued interest.\*

Miss., Bay St. Louis—Seawall—Hancock County Board of Suprvs. sold \$500,000 of \$1,250,000 Bay-Waveland seawall bonds to Whitney-Central National Bank of New Orleans, La., at premium of \$500.

Miss., Moss Point—Water Works—City, C. M. Fairley, Clk., sold \$10,000 5¼% bonds to Pascagoula National Bank, Moss Point, at par, accrued interest, etc.\*

Mo., Kansas City—Judgment—City sold \$855,400 4½% bonds to Brown-Crummer Investment Co., Schweiter Bldg., Wichita, Kan., at premium of \$150.

N. C., Smithfield—Street—Town, W. L. Fuller, Clk., sold \$130,000 5% bonds to Assel, Goetz & Moehle, Inc., Cincinnati, Ohio, at \$132,128 and accrued interest.\*

Okla., Stillwater—Road—Payne County Commrs. sold \$160,000 4½% of \$1,000,000 bonds to First National Bank of Stillwater at premium of \$550.\*

S. C., Charleston—School—Charleston County Commrs. sold \$100,000 5% St. Paul's Centralized School Dist. No. 23, Meggett, bonds to Prudden & Co., Home Bank Bldg., Toledo, Ohio, at 103.27.

S. C., Conway—Water Works—Town, L. D. McGrath, Mayor, sold \$30,000 5½% coupon bonds to South Carolina National Bank, Charleston, at 102.88.\*

S. C., Georgetown—Highway—Georgetown County Commrs., W. A. Campbell, Clk., sold \$100,000 5¼% bonds to J. H. Hillsman & Co., Inc., and Citizens and Southern Co., Atlanta, at \$102,720 and accrued interest.\*

(Continued on page 128)

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



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Capital, Surplus and Undivided Profits  
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# FINANCIAL NEWS

(Continued from page 126)

Tenn., Nashville—Hospital, Sanitary Sewer—City, S. H. McKay, Clk., sold \$400,000 4½% bonds to George D. Gibbons & Co., New York, at premium of more than \$3800.\*

Tex., Amarillo—Refunding—City, Jeff D. Bartlett, Mgr., sold \$250,000 5% warrants to Branch Middlekauff Investment Co., Wichita, Kan., at part and accrued interest.\*

Tex., Houston—Municipal Improvement—City, O. F. Holcombe, Mayor, sold \$3,112,000 bonds to syndicate composed of Lehman Brothers, E. H. Rollins & Sons, Redmond & Phelps, Fenn & Co., all New York, and others.\*

Va., Fort Meyer Heights—Water Works—Arlington County Board of Water Supply, Asa E. Phillips, Ch. Engr., sold \$540,000 4½% bonds to Guaranty Co. of New York at par.\*

## Building and Loan Associations

Miss., Picayune—Building and Loan Assn. of Picayune, capital \$200,000, incorporated; J. E. Dupont, Jr., E. H. Stevens.

S. C., Chesterfield—Chesterfield County Building and Loan Assn., capital \$100,000, chartered; J. C. Miller, Pres.; F. M. Therrell, Sec.-Treas.

## New Financial Corporations

Ark., Jonesboro—American Trust Co., W. W. Cate, Pres., and Merchants & Planters' Bank, C. W. Culberhouse, Pres., merged as American Trust Co. with about \$2,000,000 combined resources; W. H. Lohnes, Castini.

Ga., Dublin—First Realty & Trust Co. of Dublin, capital \$75,000, chartered; S. M. Kellan, F. M. Daniel.

Md., Baltimore—General Finance Co., Inc., 1163 Calvert Bldg., incorporated; Charles R. Haupt.

Mo., Hollister—Bank of Hollister, R. M.

Good, Pres., increased capital, \$10,000 to \$20,000.

Tenn., Nashville—Security Saving & Loan Co., R. D. Herbert, Pres., Nashville Trust Bldg., plans increasing capital to \$200,000.

Tex., Dallas—Pride of Dallas Investment Co., capital \$10,000, incorporated; P. A. Wren, 1014 Boll St.

Tex., Fort Worth—Dulaney-Johnson Investment Co., capital \$450,000, incorporated; R. O. Dulaney, Farmers and Mechanics Bldg.

Tex., Terrell—Artesia Investment Co. plans increasing capital, \$30,000 to \$55,000.

Tex., Whitney—Citizens National Bank, W. L. Sanderson, Pres., and First National Bank, A. D. Rhea, Pres., merged as First National Bank of Whitney, capital \$50,000; W. L. Sanderson, Pres.; J. N. Collier, Cashier.

National Bank of Commerce, Norfolk, Va., Norfolk National Bank and Trust Co. of Norfolk plan merging into one organization January 1, under name of Norfolk National Bank of Commerce and Trusts, with combined resources of \$40,000,000.\*

Peoples Bank, J. L. Ingles, Pres., Radford, Va., leased Martin Bldg., Norwood & Third St.; will establish branch with Thurston Turner and Mrs. L. M. Sifton in charge.

The Wage Earners Savings Bank of Savannah Ga., a city which has about 40,000 negroes among its population, is a negro institution, with deposits of more than \$1,160,000, and its total resources are \$1,305,988. Apropos of this, the Savannah Morning News recently said that "in proportion to the population, a greater number of negroes in Savannah and Chatham county own their homes than in any other centers of negro population." L. E. Williams is president of the bank and R. A. Harper is cashier. There are also three other negro banks in the city.

## Robertson Reports Small Hurricane Damage.

The H. H. Robertson Company of Pittsburgh, Pa., manufacturer of Robertson protected-metal roofing, siding and trim, ventilators, skylights and special asphalts, has some exceedingly interesting photographs showing how the company's products used in buildings at Miami, Fla., stood up under the terrific hurricane in September. They show the municipal pier sheds on the waterfront both before and after the storm. One of the pictures shows that out of more than 30 ventilators on one of the sheds which felt the full force of the wind only six were damaged, none being blown away. It would seem really that those damaged were struck by flying debris. A few deflection bands were carried away, but in most instances the ventilators stood firmly. This was a sample of the municipal pier sheds, which have, all told, 2500 squares of the company's protected metal, 135 of its ventilators and 10,500 square feet of its sash. Near one end of one of the sheds quite an area of the roofing was blown away, but that was the maximum damage to any of the company's products. In another of the buildings that also felt the full force of the hurricane a hollow-tile partition wall within was nearly all blown down, but the roofing sheets all remained in place. A small hole in another roof sheet was the only damage noted elsewhere.

## Almost 100 Per Cent Cement-Dust Recovery.

The Southern Cement Company, Birmingham, Ala., recently began operating a dust-collecting system which, it is claimed, completely solves the problem of recovering cement dust and sand from dryers, kilns, etc., thus stopping a loss of material, which occasionally amounts to several tons per day, and also stopping what was a nuisance to surroundings. At the same time, it is remarked, the new system gives an exceptionally high recovery—over 99 per cent. The hot dust and gases first pass through a separator, which recovers about 60 per cent, and the remaining 40 per cent passes into a tank, where it is mixed with atomized spray and is then precipitated as sludge. The entire equipment was installed by the Northern Blower Company of Cleveland, Ohio.

## New Road-Material Bin Produced.

Considerable interest has been aroused in a "mystery bin," which will be displayed by the Heltzel Steel Form and Iron Company, Warren, Ohio, at Booth No. 55, American Road-builders' Show, Coliseum, Chicago, January 10 to 14. The company refuses to give any details regarding this product, but it is authoritatively stated that it includes a radically new principle and is distinctly different in appearance and performance from any other bin. The batcher outfit is also a new departure.

## Stephens-Adamson Birmingham Office.

The Stephens-Adamson Manufacturing Company, manufacturer of conveying, transmission and screening machinery, Aurora, Ill., has sent out an illustrated folder carrying the announcement that Walter E. Harris now has charge of its new sales office in Birmingham, Ala. Mr. Harris has been affiliated with the company's sales organization for many years, and he has had mature experience in all departments of the labor-saving machinery business. The office is at 1108 Martin Building, Birmingham.

# INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

## Branch Barber-Greene Office.

The Barber-Greene Company, manufacturers of conveyors, loaders, ditchers, etc., have opened a new office in Kansas City, Mo., at 2045 Main street. E. H. Cooper, district manager, will be in charge. The company's complete line will be handled through this office. Headquarters are at Aurora, Ill.

## Goes From Westinghouse to Molybdenum Corporation.

Announcement that G. M. Eaton, chief mechanical engineer of the Westinghouse Electric and Manufacturing Company, would after December 1 identify himself in a sales engineering capacity with the Molybdenum Corporation of America was made on November 20 at a dinner held in his honor at the Rittenhouse Hotel, Pittsburgh, Pa. Mr. Eaton was associated with the Westinghouse Company for 20 years, going with them in 1906 after serving for some years with the Newport News Shipbuilding and Dry Dock Company of Newport News, Va., and also with the Union Iron Works of San Francisco, Cal. He is a native of Worcester, Mass., and graduated at the Polytechnic Institute there. He has been prominently identified with the development of electric-railroad transportation problems, and especially with developing the Westinghouse electric locomotives in use on the Pennsylvania Railroad, the Norfolk and Western Railway and other lines. In a consulting capacity he will continue to have relationship with the Westinghouse Company.

## Ashland Fire Brick Bulletin.

A fine illustrated bulletin of its products has been published by the Ashland Fire Brick Company, Ashland, Ky. It says: "The non-vitrifying quality and great bonding power of hand-moulded and hand-pressed Ashland Savage and Ashland Empire Crown provide maximum protection in furnace roofs and other places where spalling is an important factor. Ashland Ashfrax is particularly serviceable for extremely destructive conditions." It maintains a fusing point of approximately 3400 degrees Fahrenheit. Many other facts about the company's products are given.

## Climax Speed-Reduction Gear.

The normal speed of a heavy-duty industrial gasoline engine averages, it is stated, around 950 to 1000 revolutions per minute, but many units to be driven must run at speeds decidedly lower than this, so the engineering department of the Climax Engineering Company, Clinton, Iowa, has developed a 3½ to 1 reduction gear for use with Climax engines, Models TU, R4U and R6U. This speed reducer consists essentially of a compact set of heat-treated cut gears enclosed in an oil-proof, dustproof housing that is bolted to the flywheel housing of the engine. The high-speed shaft and the low-speed shaft rotate in the same direction and the gears run in oil, operating with a minimum of noise. There is a twin-disc clutch which allows the engine to be started independently of the load; then the load is taken on.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



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**N**O one can prophecy the extent of the South's development in its present full-swing progress, but it is of interest to study certain facts which afford convincing comparisons.

New England, with but 66,000 square miles, and lacking coal, iron, and raw material, has created an invested manufacturing capital of \$5,656,000,000.

The South, with fifteen times the area of New England and with unlimited resources, today has but \$1,200,000,000 more invested in such industries. The South's possibilities are tremendous!

Even with proportionate growth the South will soon measure up to any man's prophetic vision which sees in it the greatest Empire of Industry in the world.

Banking and financial houses of the South have also developed in recent years and are strong enough to meet the financial needs of Southern industries. Caldwell & Company, for one, stand ready to supply capital drawn from a wide territory to established Southern corporations, and suggest that officials of such concerns, when considering questions of financing, get in touch with our Corporation Department.

*"We Bank on the South"*

**CALDWELL & COMPANY**  
SOUTHERN SECURITIES

400 Union Street Nashville, Tennessee  
Offices in Principal Cities

## COFFIN, FORMAN & CO., Inc.

*Investment Securities*

*We are continuously  
in the market for  
entire issues of*

**Securities**

*based upon Indus-  
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and earning power.*

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*We Buy and Sell*

**MUNICIPAL BONDS AND NOTES  
CORPORATE PREFERRED  
STOCK and BOND ISSUES**

*See Us on Southern Financing*

**R. S. DICKSON & CO.,** Gastonia, N. C.  
New York Greenville, S. C. Goldsboro, N. C.

## WE BUY MUNICIPAL BONDS

We are interested in the purchase of Southern Municipals including road, school, county, drainage and levee bonds.

**M. W. ELKINS & CO.**

Southern Trust Bldg. Little Rock, Ark.

## MARYLAND TRUST COMPANY BALTIMORE

Transacts a General Trust and Banking Business

Correspondence and interviews invited

CAPITAL, \$1,000,000

## REAL ESTATE MORTGAGE BONDS

We are interested in the purchase of first mortgage bond issues covering business property, hotels, apartment houses, etc., in amounts of \$50,000 and upwards. Entire issues city, county and district bonds purchased.

**MARX AND CO.**

Brown-Marx Bldg. Birmingham, Ala.

### Santa Fe System Feels It Was Rebuffed.

Plainview, Texas, December 11—[Special.]—It is indicated by W. B. Storey, president of the Atchison, Topeka and Santa Fe Railway Company, that no further extensions of that system will be constructed in northwest Texas. Replying to a telegram from Plainview citizens inviting him to attend the celebration given here of the favorable action by the Interstate Commerce Commission on the application of the Fort Worth and Denver City Railway to construct new lines in this region, Mr. Storey wired that he was unable to attend same. His telegram continued:

"We will continue to give you good service, but the refusal to allow us to build to Silverton and Dimmitt, and thus still further develop the plains country, is such a slap in the face that I doubt any further efforts on our part in the way of opening new territory."

Mr. Storey's telegram is regarded as contradictory of the recent report that the Atchison, Topeka and Santa Fe system would soon make application to the Interstate Commerce Commission for a permit to construct a railroad between Post and Fort Worth, Texas.

### A Social Science Research Institute for University of Virginia.

The first announcement, made last June, of the Social Science Research Institute to be established at the University of Virginia is now followed by further details, as reported by the Danville Register. The new department is made possible by a grant of \$27,500 annually for five years from the Laura Spellman Rockefeller Memorial. It is felt that there is a good chance of a renewal of the gift if the results achieved during the first five years satisfy the Memorial. The initial work of the institute will be research into a number of vital economic and social problems of the rapidly changing life of the state. This will include county government and its relation to the general subject of local government. A full-time research professor will be added to the university staff for this work. It is hoped that later a research may be made into the causes and results of sectionalism in Virginia.

### Wants Textile Plant.

Baxter Genoble, superintendent, Monetta Consolidated School, Monetta, S. C., writes:

"We are anxious to secure a textile plant for this town. One party offers to donate 500 acres of land; it contains a dam. There is plenty of local help; we are in the midst of the cotton-growing region, with hydro-electric power available. We are located on the Southern Railway between Columbia, S. C., and Augusta, Ga."

### Roanoke Water-Works to Build 90-Foot Dam—Reservoir With Surface Area of 600 Acres and Capacity of 6,500,000,000 Gallons.

Roanoke, Va.—After a study of several years which has led to the conviction that new water sources must be tapped to meet the demands of a steadily growing city, the Roanoke Water-Works Company will soon undertake the construction of a dam and necessary conduits. It plans a masonry dam 90 feet high at the mouth of Carvin's Cove, on Carvin's Creek, seven miles north of Roanoke, and has awarded building contract to the W. W. Boxley Company of this city. Plans and specifications for the structure were prepared by Sanborn & Bogert, consulting engineers, of New York city. Field surveys were made by Robert E. Wysor of Dublin, Va., who is the resident engineer of construction.

The proposed dam will be built across a comparatively narrow, rocky gorge and will form a reservoir with a surface area of 600 acres and a total capacity of 6,500,000,000 gallons, of which 4,500,000,000 gallons will be available by gravity. The watershed behind the dam is rocky and mountainous, covering an area of about 18 square miles. By a process of elimination, which involved a consideration of several types, the engineers decided upon the masonry dam of the gravity type, this selection being influenced partly by rock foundations available at the surface. The structure will contain 18,000 cubic yards of masonry and, with a pipe line, will require about 24 months to build.

To take care of flood flows, the center of the dam will have an overflow section. A chamber has been provided next to the overflow, to be equipped with large gates at different levels, so that water may be drawn at various depths, depending upon the season. Removable screens have also been provided.

### A Century of Davison Chemical Company.

"Davison: 1826-1926" is the terse title that appears on the cover page of a beautifully illustrated book published by the Davison Chemical Company, Baltimore, Md., and commemorating the one hundredth anniversary of the organization, which was founded in 1826 by William Davison. The first chemical establishment of the founder was on land that is now part of the bottom of Druid Lake, an artificial reservoir in Druid Hill Park. Several years later a plant was built near what is now Federal Hill Park, on the southern side of the upper harbor of the city, and there was erected, it is claimed, the first sulphuric-acid chamber in the United States. Starting with these introductory facts, the book gives the history of the company to the present day, with officers, etc.

### The Oscar T. Smith Company

Manufacturing Bank Stationers  
CURTAIN AND AIKEN STS.  
BALTIMORE, MD.

OSCAR T. SMITH  
President

Delaware Corporations  
Forms, Law and Pointers  
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### DELAWARE REGISTRATION TRUST CO.

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STATE—COUNTY—CITY  
*Financing*  
CURTIS & SANGER  
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## A Charming Winter Resort

SEASON:

—  
November 20  
TO  
May 1

Increasing thousands are journeying every year Southward from Northern states. The benefits from a change during the winter months to a genial climate are fully recognized. They mean added years of life and happiness.

The Highland Pines Inn offers rest and recreation. We are flattered by the praise our friends are pleased to give for what they term "unusual hospitality," and we are gratified that they return year after year.

Unsurpassed golf courses and a new clubhouse add to the pleasure of our guests.

*Main Line Seaboard Air Line Railroad with through Pullman service.*

*Half way between New York and Florida.*

Golf  
Polo  
Riding  
Tennis  
Racing  
Hunting  
Canoeing  
Motoring

**HIGHLAND PINES INN, Weymouth Heights, Southern Pines, N. C.**  
**CREAMER & TURNER, Proprietors**

### GERALD S. TRITT

Advocate, Barrister,  
Counsellor-at-Law,  
Solicitor

Suite 418 A  
190 St. James Street

MONTREAL  
CANADA

### Municipal Bonds

Inquiries invited from municipalities and contractors. We buy city, county, district, school, road, lighting, water works and other municipal issues.

**A.C. ALLYN AND COMPANY**

67 W. Monroe St., Chicago, Ill.

New York Boston Philadelphia Milwaukee Minneapolis San Francisco

### HAVE YOU BONDS FOR SALE?

WE BUY ALL CLASSES OF MUNICIPAL BONDS,  
INCLUDING CITY, COUNTY, SCHOOL,  
PAVING, ROAD AND DRAINAGE

*The Hanchett Bond Co. Inc.*

39 SOUTH LA SALLE ST., CHICAGO

**We Buy Bonds**  
City, County, School and Road from  
Municipalities and Contractors

WRITE

**THE PROVIDENT SAVINGS BANK & TRUST CO.**

CINCINNATI

OHIO

**Taylor,  
Wilson  
& Co. Inc.**  
INVESTMENT SECURITIES

### WE BUY MUNICIPAL BONDS

Public officials are invited to avail  
themselves of our facilities for  
preparation of legal details.

Your inquiry receives prompt attention.  
UNION TRUST BLDG. CINCINNATI

### JOHN NUVEEN & CO.

First National Bank Building

CHICAGO

We purchase SCHOOL, COUNTY and MUNICIPAL  
BONDS. Southern Municipal Bonds a Specialty.

Write us if you have bonds for sale

Underwriters and Distributors of  
Municipal and Corporation Bonds  
**OTIS & CO.**

Established 1899  
CLEVELAND

New York Chicago Detroit Cincinnati Denver  
Columbus Toledo Akron Colorado Springs

### SOUTHERN TEXTILE SECURITIES

**A. M. LAW & COMPANY**

Established 1892

Spartanburg, S. C.

### A Questionnaire to Determine Local Advantages and Disadvantages.

A. T. Roberts, publicity manager for the Columbus (Ga.) Electric and Power Company, some time ago launched a campaign for "selling" Columbus manufacturers on the advantages of their own city, in order to persuade them to increase their productive capacity. It is stated that as a result of this campaign there was a large and rapid increase, which still continues.

In his publicity work for the power company Mr. Roberts is using a questionnaire in analyzing the advantages and disadvantages of the towns served by the company with a view to extending to each of them the same constructive work previously done in Columbus.

The idea can doubtless be used to advantage by other cities as a basis of a searching civic self-examination; for civic reformation, where reformation is needed; for civic pride, where pride is justified; for civic enthusiasm, faith in the future and business expansion, where they are warranted. For those cities that measure up sufficiently well it can be used as an attraction to new industries.

The questionnaire, with blanks for answers omitted, is as follows:

Form of Government; Population—White Males, White Females, Colored Males, Colored Females; Railroads; Improved Highways; Paved Highways; Number of Telephones; Telegraph Offices; Banks; Bank Clearings; Postoffice Receipts; City Tax Rate, County Tax Rate, State Tax Rate—Total; Tax Exemption; City Tax Values; County Tax Values; Raw Materials for Manufactures and Estimated Supply (includes timber, minerals, etc. Tell how they can be reached); Power (Hydro Horsepower, Steam Horsepower); Average Cost of Steam Coal; Water Supply; Analysis of City Water; Capacity Year Round; Water Rates; Fire Department; Insurance Rates; Police Department; Military Company; Nearest Streams; Ponds That Do Not Dry Up; Average Labor Cost—Iron Workers, Wood Workers, Clay Workers, Women Workers, Unskilled Labor; Industrial Sites Having Railroad Frontage, Convenient to Labor, Water and Power, With Approximate Costs Per Acre; Would Owners of Any of These Donate Sites to Good Enterprises? Attach Diagram of Some of These Sites and Give Prices and Terms for Them; Industrial Plants in Operation—Product, Value of Product, Number of Employees; Any Vacant Factory Buildings; Describe and Tell Why They Are Not Now in Operation; Building Cost—Cost of Brick, Average Lumber Cost, Wages of Bricklayers, Carpenters, Roofers, Labor.

Give Cost of Several Recent Industrial Buildings Per Square Foot, Remarks; Churches—Names, Membership, Average Attendance; Public School System; Private Schools; Colleges; Newspapers; Chamber of Commerce; Libraries; Country Club; Golf Course; Swimming Pools; Theaters; Civic Clubs; Do Leading and Wealthiest Citizens Take Prominent Part in Public Movements? Number of Homes in City; Average Number of Houses for Rent; Average Rental Per Room; Hotels; Birth Rate; Death Rate; Malaria? Typhoid? Hospitals; Distance to Nearest Hospital; Rainfall; Summer Average Temperature; Winter; Agricultural Information—Number of Farms in County, Value of All Farm Products, Prevailing Type of Soil, Major Crops, Fruits and Vegetables; Value, Cattle, Hogs, Poultry, Eggs, Dairy Products; Number of Dairies Number of Dairy Cows, Poultry Farms, Nearest Creamery, Pick-up Car Service for Poultry, Average Price of Farm Lands on Improved or Paved Highways, Wild Land, Rural School Facilities, General Information and Remarks.

### Sale of \$350,000 Levee Bonds.

McGehee, Ark.—A bond issue of \$350,000 has been sold by the Southeast Arkansas Levee District to the W. B. Worthen Company, Little Rock, on the basis of a purchase price of 95.5. Proceeds from the sale will be used to pay the district's share of the cost, amounting to one-third, for enlarging and strengthening Mississippi River levees in Chicot and Desha counties.

### For \$825,000 Hotel at Lake Charles.

Lake Charles, La.—Preliminary plans are being prepared by R. S. McCook of this city for a new hotel to be erected here at a cost of approximately \$825,000, including \$200,000 for furnishings and equipment. The building will be of steel and concrete, seven stories, with reinforced concrete foundation, oak, marble tile and terrazzo floors. Its promoters plan to organize a corporation for handling building details.

### All About Louisiana.

"Louisiana, 1925-1926" is the title of an entertaining and instructive book of 275 pages, published by the State Department of Agriculture and Immigration, Harry D. Wilson, Commissioner, Baton Rouge. Briefly, it is an encyclopedia of Louisiana, for the story of the State and its resources and possibilities is told in both words and pictures in a very detailed manner, accurately but in a style which holds the attention of the reader through the volume. The answer to almost any question one may ask about Louisiana is to be found within its covers. A comprehensive view of the Commonwealth may be obtained from the illustrations alone.

### Geological Book of Three Counties in West Virginia.

There has just been issued from the press a new publication of the West Virginia Geological Survey, I. C. White, State Geologist, Morgantown, W. Va. It is a detailed report of more than 950 pages on Mercer, Monroe and Summers counties, by David B. Reger, assistant geologist, assisted by Paul H. Price. The volume, which is substantially bound in blue cloth, is illustrated with 34 halftone plates and 30 zinc etchings; there is also a separate case of geologic and topographic maps of each county. The price, with delivery charges prepaid, is \$3.50. Further particulars may be obtained on application to the Survey at Morgantown.

### Land Development in South Texas.

The Catarina project in south Texas, between Bart and Asherton, has been opened up for agricultural development in the past year. The tract is largely in Dimmit county, though part of it is in La Salle county. According to reports from the Federal-state market news representative at San Antonio, it is estimated there are in the neighborhood of 1000 acres of dry-land spinach being grown for the first time on this land and possibly 150 acres under irrigation. There are also around 150 acres of irrigated onions. Most of these plantings are on land cleared and broken in the spring, with a view to being in condition to grow crops this winter. Also, there are stretches of very appreciable size being tractor-broken at present, but such crops as they may grow this winter will not enter marketing channels to any extent and will probably be turned under to bring the soil into condition for another season's cultivation.

Nearly 100 acres of citrus, mostly oranges, have been set out in this section, but irrigation facilities are only partially developed. It is necessary to go rather deep for water, but the supply at 1250 to 1500 feet is plentiful, and some are getting a good flow at 850. An idea of the development may be had when it is considered that six months' sales in this project alone have totaled millions of dollars, some 37,000 acres having been sold. It is generally calculated that the cost per acre for drilling the well, placing pumping machinery and building the necessary reservoirs is around \$75, and, with a clearing cost between \$12 and \$20 an acre (depending on the type of brush on the land), this makes the average cost of farms in the section around \$137-\$145 an acre. The land sells in the brush, as a rule, for \$50 an acre.



## Record Sulphur Shipment Opens New Market for Texas.

Galveston, Texas, December 11—[Special.]—With the taking on of a cargo of 10,010 tons of sulphur at the pier of the Texas Gulf Sulphur Company by the Steamship Anglo-Columbian and its departure for Australia on December 1, a new record of sulphur shipment was set at this port, the largest single previous cargo being 10,000 tons. The shipment is also regarded as significant as marking the opening of a new market for Texas sulphur. In the past Australia has obtained much of its sulphur from New Zealand.

## To Complete San Marcos Mills.

San Marcos, Texas.—The San Marcos Cotton Mills, Inc., has received permission from the State Department, Austin, to sell \$350,000 of a \$500,000 stock issue authorized and is

making plans to complete its cotton mill here and install machinery. Construction will be under the supervision of P. M. Keller, who will operate the mill upon its completion, and he will be assisted by J. C. McKeenon and C. W. McKeenon. The plant will provide employment for approximately 300 workers.

## Work Starts on \$2,000,000 Building.

San Antonio, Texas.—Excavation is in progress for the foundation of a 21-story office and store building to be erected at Travis and Soledad streets by the Travis Investment Company, Charles Willard, general manager, at a cost of \$2,000,000. The structure will be 114 by 137 feet, of reinforced concrete, brick face and cast-stone trim. George W. Willis is the architect and M. L. Diver engineer, both of San Antonio. The general contract is being executed by L. T. Wright & Co., also of this city.



# PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close January 6, 1927.

### \$800,000 5½% Highway Bonds

Live Oak, Fla.

NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Suwannee County, Florida, will receive sealed bids at the office of the Clerk of the Circuit Court in Live Oak, Florida, on or before the expiration of thirty days from the first publication of this notice, for the sale of those certain bonds, or any part thereof, known and designated as "Suwannee River Scenic Highway Bonds of Suwannee County, Florida, Issue of 1926," of the denomination of \$1000 each, in the aggregate sum of \$800,000, dated July 1, 1926, drawing interest from date at the rate of 5½ per cent per annum, and payable semi-annually on January 1 and July 1 of each year from date of issuance, and maturing serially as follows:

\$160,000 due ten years from date.  
\$160,000 due fifteen years from date.  
\$160,000 due twenty years from date.  
\$160,000 due twenty-five years from date.  
\$160,000 due thirty years from date.

Both the principal and interest are payable at the Hanover National Bank, New York City. Said bonds being voted and issued for the purpose of constructing, paving and hard surfacing Suwannee River Scenic Highway and State Road No. 5-A. Said bonds are validated by a decree of the Circuit Court, and all bids shall be made and accepted subject to the approving opinion of Messrs. Caldwell & Raymond, attorneys, 115 Broadway, New York City, New York, as to the validity of the bonds. The interest coupon maturing January 1, 1927, to be detached and destroyed by the County Commissioners. Each bid shall be addressed to J. W. Bryson, Clerk to the Board of County Commissioners, Live Oak, Florida, and shall be accompanied by a cashier's check, payable to said Clerk, in the sum of \$5000. Said check of the successful bidder to be retained by said Commissioners until said bidder has complied with the terms of his bid. The County Commissioners reserve the right to reject any and all bids. Blanks on which bids are to be made will be furnished free of charge on application to said Clerk. The said Commissioners shall meet at the Court House in Live Oak, Florida, in the office of the Clerk of the Circuit Court, at ten o'clock A. M.

JANUARY 6, 1927.

for the purpose of opening and considering said bids. The first publication of this notice to be December 7, 1926.

W. L. ROGERS,

Chairman of Board of County Commissioners of Suwannee County, Florida.

J. W. BRYSON,

Clerk to the Board of County Commissioners of Suwannee County, Florida.

RATE: 35 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE: 4 P. M. Monday.

DAY LETTER: When too late to send copy by mail to reach us by 4 P. M. Monday, forward by day letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—35 cents per line per insertion.

Bids close February 7, 1927.

U. S. Engineer Office, Mobile, Ala. Sealed proposals will be received here until 11 o'clock A. M. February 7, 1927, and then opened, for constructing and delivering one 100-foot Diesel Electric harbor tug. Further information on application.

Bids close December 28, 1926.

SEALED PROPOSALS will be received by U. S. Veterans Bureau, Room 791, Arlington Building, Washington, D. C., until 11 A. M. December 28, 1926, and then and there publicly opened, for construction of one M. O. C. Quarters and three Duplex Officers' Quarters at U. S. Veterans Hospital No. 60, Oteen, N. C. This work will be for two-story frame buildings with bevel siding and shingle roofs and includes concrete work, metal lathing, plastering, carpentry, insect screens, hardware, painting, glazing, plumbing, heating and electrical work. Proposals will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract, and in making awards the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Director, drawings and specifications may be obtained upon application to the Construction Division, Room 791, Arlington Building, Washington, D. C. Deposit with application of check or postal money order for \$20, payable to the TREASURER OF THE UNITED STATES, is required as security for safe return of the drawings and specifications within ten days after date of opening proposals. FRANK T. HINES, Director, November 30, 1926.

## Auction Sale

### \$1,000,000 Improvement Bonds

Jackson, Miss.

THE CITY OF JACKSON, MISSISSIPPI, will offer for sale at auction at the City Hall at Jackson, Mississippi, on December 21, 1926, \$1,000,000 GENERAL IMPROVEMENT BONDS AS FOLLOWS: \$250,000, Water-Works Extension and Improvement Bonds, dated January 1, 1927, in denominations of \$1000, maturing serially over a period of twenty-five (25) years as follows:

5 bonds for \$1000 each, payable annually on January 1, making a total of \$5000 each year, or \$25,000 in first five years.

10 bonds for \$1000 each, payable annually on January 1, making a total of \$10,000 each year, or \$100,000 in the next ten years.

13 bonds for \$1000, payable January 1 in each of the years of 1943, 1945, 1947, 1949 and 1951, and 12 bonds for \$1000 each, payable January 1 in each of the years of 1944, 1946, 1948, 1950 and 1952, making a total of \$125,000 during the last ten years.

750,000 General Improvement Bonds of 1927, dated January 1, 1927, denomination of \$1000 each, twenty-five (25) year serial, maturing as follows:

15 bonds for \$1000 each, payable annually, making a total of \$15,000 each year, or \$75,000 during the first five years.

30 bonds for \$1000 each, payable annually, making a total of \$30,000 each year, or \$300,000 during the next ten years.

38 bonds for \$1000 each, payable on January 1 in each of the years of 1943, 1945, 1947, 1949 and 1951, and 37 bonds for \$1000, payable on January 1 in each of the years 1944, 1946, 1948, 1950 and 1952, making a total of \$375,000 during the last ten years.

The above bonds are direct obligations of the City of Jackson and were authorized by a vote of the people on November 10, 1926, and are issued under and by authority of Chapter 147 of the Laws of 1914.

Semi-annual interest, payable July and January of each year, principal and interest payable at the National Park Bank in the City of New York, N. Y.

Bonds to be validated according to the Laws of the State of Mississippi and to be approved by Thomson, Wood & Hoffman, Bond Attorneys of New York.

The city reserves the right to reject any or all bids if not satisfactory.

Separate bids will not be received on above bonds, but will be treated as one issue.

A deposit of not less than 2% of the total issue must accompany each bid.

The interest rate has not been fixed and will be considered part of bid.

The bonds can be delivered to buyer on or before February 1, 1927, unless legal complications should arise.

Bids close January 5, 1927.

**Bridge Substructure**

Fayetteville, W. Va.  
SEALED proposals will be received by the County Court of Fayette County, West Virginia, at the Courthouse in Fayetteville until 10 o'clock A. M. on the 5th day of January, 1927, and opened and read immediately thereafter, for the construction of Substructure for Bridge over New River at Stone Cliff, West Virginia.

The approximate quantities are as follows:

2,600 Cubic Yards of Plain and Reinforced Concrete.

2,830 Cubic Yards of Dry, Wet and Rock Excavation.

\$5,530 Pounds Reinforcing Steel.

Proposals will be received only upon standard forms in accordance with plans, specifications and estimates of quantities thereof, which standard forms, plans, specifications and estimates of quantities may be obtained from the County Road Engineer at Fayetteville, West Virginia.

Each proposal must be accompanied by a certified check in the amount of \$4000.

The right is reserved to reject any and all proposals.

THE COUNTY COURT OF FAYETTE  
COUNTY, W. VA.  
By THOMAS BOONE, Clerk.

Bids close January 4, 1927.

**Sanitary Sewers**

Macon, Miss.  
Sealed proposals for the construction of sanitary sewers will be received by the Mayor and Board of Aldermen of the City of Macon, Mississippi, until 7.30 P. M. on the 4th day of January, 1927.

The work embraces approximately 44,000 linear feet of pipe sewers, 8 to 10 inches in diameter; 106 manholes and 8 flush tanks.

Bids will be received on any or all divisions of the work and materials.

Plans and specifications and blank proposals may be obtained from Murphy & Watts, Engineers, or City Clerk of Macon, Mississippi.

Each bid must be accompanied by a certified check on some solvent bank of Macon, Mississippi, for five (5%) per cent of the amount bid as evidence of good faith.

The Board reserves the right to reject any and all bids.

By order of the Board of Aldermen this, the 8th day of December, 1926.

MARY B. SCOTT,  
City Clerk.

Bids close January 12, 1927.

**Water Works Improvements**

Henderson, N. C.  
Sealed proposals will be received by the City of Henderson, N. C., until 11 A. M. January 12, 1927, for the construction of Water Works Improvements.

The work will consist of the construction of a complete Water Purification Works, including Subsidence Basins, Filters, with all Filter Equipment and Piping; Clear Water Basin, Brick Building, Filter Housing, Pump Room, Chemical Storage, etc.; Pumping Equipment and Electrical Control Equipment for the same; twelve (12") inch Cast-Iron Pipe Line to connection with existing Distribution System, and certain other items necessary for complete New Purification Works.

Proposals must be marked "PROPOSALS FOR WATER WORKS IMPROVEMENTS." All bids must be made on the blank forms provided in copies of the PROPOSAL, CONTRACT AND SPECIFICATIONS and delivered to the Mayor and City Council of the City of Henderson, N. C.

Each bid must be accompanied by a certified check in the amount of five (5%) per cent of the amount of the bid, but in no case for less than Two Hundred Fifty (\$250) Dollars, as evidence of good faith.

Bids will not be received from any Contractor who is not licensed under the laws of North Carolina.

Copies of the Plans, Specifications, Form of Proposal, Contract, etc., may be obtained upon application to the Engineer.

The right is reserved to reject any or all bids or to award contracts which, in the opinion of the Engineer and the City Council, appear to be for the best interests of the city.

S. R. CHAVASSE, Mayor.  
S. B. BURWELL, City Clerk.  
WILLIAM C. OLSEN, INC.,  
Consulting Engineer,  
Raleigh, N. C.

Bids close December 29, 1926.

**Virginia Highway Work**

Richmond, Va.  
The Commission will receive bids on  
Proj. F-221-B—Three miles concrete.  
Proj. S-335-B—1.8 miles grading.  
Proj. S-406-EFGH—Four bridges.  
Proj. F-420-C—Ten miles concrete.  
Proj. F-455-B—Bridge Nottaway River.  
Proj. F-455-C—Bridge Waqua Creek.  
Proj. S-481—Bridge Wallen's Creek.  
Details obtainable on request.

Bids close January 3, 1927.

**Courthouse**

De Land, Fla.  
Notice is hereby given to contractors that the Volusia County Board of Commissioners, acting for and representing Volusia County, State of Florida, will receive sealed proposals on the third day of January, 1927, at De Land, Florida, for the erection of Volusia County Courthouse.

Plans will be on file for inspection by contractors at the following places: At office of S. D. Jordan, Clerk of the Court of Volusia County, Tampa Builders' Exchange, MacDonough's Builders' Exchange, Jacksonville, Florida, and the Atlanta Builders' Exchange; also at the office of the Architects, W. D. Harper & Co., Daytona Beach, Florida.

Plans may be had of the Architects upon cash deposit of \$50 as a guarantee of good faith, and that the contractor will submit to the County Clerk of the Court a bona fide proposal in accordance with the plans and specifications on or before date set for opening bids, and also that the plans will be returned to the Architects in good condition. If said bona fide bid is rejected, then the Architects will refund \$40 to said bidder.

In case of failure on the part of the contractor to file bona fide bid as required, he shall forfeit to the Architects the full amount of cash deposit as liquidated damages.

BOARD OF COUNTY COMMISSIONERS  
OF VOLUSIA COUNTY, FLA.

By W. P. WILKINSON,  
Chairman.

Attest: SAM'L D. JORDAN,  
Clerk.

Bids close January 10, 1927.

**High School Building**

Miami, Fla.  
The Dade County Board of Public Instruction will receive at the Board's office, Central School Building, 69 N. E. Third street, Miami, Florida, at 1.30 P. M. January 10, 1927, sealed bids for the construction of a Miami Senior High School Building to be located at S. W. 24th avenue and 1st street, Miami.

Plans and specifications may be obtained at the office of Kiehnel & Elliott, Architects, 930 Seybold Building, Miami.

Bids will be received from General Contractors covering the construction of the building, both with and without Plumbing and Electrical work. Separate bids will also be received from Plumbing and Electrical Contractors on these items. Separate Mechanical Contracts may be awarded if to the Owner's interest.

Owner reserves the right to reject any or all bids.

General Contractors may receive two sets of plans; Plumbers and Electricians who want to submit separate bids one set. A deposit of twenty-five dollars (\$25) per set will be required to insure the safe return of plans and specifications.

Bid Bonds or Certified Checks must accompany proposals as follows: Proposals on General Contract, exclusive of mechanical, twenty thousand dollars (\$20,000); proposals on Plumbing only, one thousand dollars (\$1000); proposals on Electrical only, one thousand dollars (\$1000).

Surety Bonds of 100% of contract prices will be required of successful bidders, but the Owner will pay the premiums on same.

The Owner will make bi-weekly cash payments on contracts amounting to 85% of work completed and material on the grounds.

CHAS. M. FISHER,  
County Superintendent.

Bids close December 21, 1926.

**Hospital**

Ocala, Fla.  
Bids will be received by the City Council until December 21, 1926, until 8 o'clock P. M. Geo. MacKay, Architect, Ocala, Florida. Approximately one hundred thirty thousand dollars (\$130,000). Contracts will be awarded as follows: (1), General Contract; (2), Plumbing, Heating and Electrical; (3), Masonry, and (4), Plastering.  
GEO. MACKAY, Architect.

Bids close January 11, 1927.

**10,000,000 Gallon Centrifugal Pump**

Macon, Ga.  
On Tuesday, January 11, 1927, at 6 o'clock P. M., bids will be received for one 10,000,000-gallon Centrifugal Pump, Steam Turbine Drive, to be installed at the Riverside Pumping Station of the Macon Water Works. The right is reserved to reject any and all bids. For further information prospective bidders may communicate with R. E. Findlay, Secretary and Treasurer, Board of Water Commissioners, Macon, Ga.

Bids close December 20, 1926.

**Sea Wall and Municipal Pier**

Bradenton, Fla.  
Sealed Proposals addressed to City of Bradenton, care R. K. Van Camp, Commissioner Public Works, Bradenton, Florida, for construction of concrete Sea Wall and Municipal Pier in Manatee River at Bradenton, Florida, will be received until 1.30 o'clock P. M. December 20, 1926.

Certified check or New York draft, made payable to Geo. B. Wallace, Mayor, for amount of \$5000, or 5% of any portion less than the whole, must accompany bid.

Plans and specifications on file at City Hall and may be obtained on payment of \$5.00, covering cost of reproduction.

Right is reserved to reject any or all bids.

R. K. VAN CAMP,  
Commissioner Public Works.  
L. L. HINE, City Clerk.

Bids close December 22, 1926.

**School Furniture and Equipment**

DEPARTMENT OF EDUCATION.  
OFFICE OF THE  
BOARD OF SCHOOL COMMISSIONERS,  
MADISON AND LAFAYETTE AVENUES.  
Baltimore, December 8, 1926.

Separate Sealed Proposals, in duplicate, indorsed "Proposals for Furniture and Equipment for Department of Education," "Proposals for Furnishing Domestic Science Equipment, Furniture and Supplies for the Department of Education" and "Proposals for Furnishing and Delivering Equipment and Supplies for Industrial Arts for the Department of Education" addressed to the Board of Awards of Baltimore City, will be received at the office of F. A. Dolfeld, Esq., City Register, City Hall, Baltimore, Md., until 11 o'clock A. M. Wednesday, December 22, 1926.

Specifications for either of the above may be obtained at the office of the Board of School Commissioners, Madison and Lafayette avenues. Each bid must be accompanied by a certified check of the bidder, made payable to the Mayor and City Council of Baltimore, and drawn on a clearing-house bank as follows: For Proposal for Furniture and Equipment, \$100; for Proposal for either Domestic Science or Industrial Arts, \$50.

The successful bidder will be required to give bond for the faithful performance of his contract in an amount equal to the contract price, and to comply with the City Charter respecting contracts.

The Board of Awards reserves the right to reject bids for any or all items.

JOHN H. ROCHE,  
Secretary Board of School Commissioners.  
Approved December 8, 1926.

HOWARD W. JACKSON,  
President Board of Awards.



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